	Protein Synthesis:
	Protein syn & orig
udu (*)	Process of synthesizing amino acids (basic Structural unit) in
vot a	the form of chains, collectively known of as polypaptides.
•	Synthesis Occurs in Ribosomes.
	Ribosomes
ri stu	
starga	Small submit 2 sub units and large subunit made of rRNA of proteins . has 3 active sites
	the A to asked many fight digente- Exit site
	catalytic P- Peptidyl site
194 ,	A loss contar one 27 E les Avigt activity. I At Aminoacy site
	Functions of ribosome are to read sequence of codons in mRNA.
ane	tRNA - transports amino ocids and other essentials in correct
-:	sequence well as the third is the third in
	mRNA- messenger RNA.
	A to galdonied AUAL & Circula transport RNA.
	Translation involves 2 phases:
	resident outribation !!
, ;	· Elongation
51 h	· Termination.
titient	The many HAS List, the end is and a visit of
•	All ribosomes have 3 binding sites
•	Amino acyl-tRNA birding site [A-site] Name has enough explanation
	Binding site for amino acyl tRNA during elongation.
	o o congentory.
	Peptidyl trava binding site [P-site].
	t-RNA winked to the elongating
	t-RNA winked to the elongating polypeptide chain is bound.
	The exit site [E-site].
	Site where t-RNA relacate.
	from ribosome.
	site where t-RNA reloctates from p-site before its release from ribosome.

	Date
	amino acid
- - 	Activation of amino acidi
-	Activation of amino acid: R-CH-COOH Ensymet Adenosine-0-1-0-C-CH-R. NH2
,	R-CH-COOH Ensymet Adenosine-0-1-0-C-CH-R.
neficijsk	OH NH
i desare	NH2 trigyme
nysia	A THOUSE
	Amino acid Enyme of Aden osine Mono phosphate complex (AMP)
	Amino acid complex (Amp)
SEP-LOT	
ting and	Reaction with the complex:
estation of	Reaction after complex formation:
	splitting of ERNA bound to amino acra from
	AMP and ensyme.
intowing it	Activation.
	Occurs in cytosol, catalysed by amino anyl tRNA synthetoses
	Au amino acids (types), activated and bound to 3' end of
	their specific tRNA in presence of ATP and mgt.
	Initiating amignoacid:
-	i) Prokamptes: N-dormy lated methionine.
access of	
	ii) Eukanyotes: metaionine.
The second secon	
	* methionine activated by methionyl-tRNA synthetose.
	* N-formylmethionine uses either of:
	+ tranmet
	tRNA fret.
an constitution of	- Limitimes.
	[[전기 : 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

	Initiation:
*	IF-3 (initiation factor-3) binds to small subunit (30, subunit)
*	mRNA binds to small subunitain such a way the initiator
	codon is in P-site, and codon is in A-site.
•	And the second s
*	
	IF m2' helps specify the P-sik for the tRNA, while using GITP. (Gruanosine tri phosphate).
	IFI prevent tRNA from birding at A. site.
	654 119 9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
*	After binding of iniator tRNA, all 3 IF's are released for the
	y'oining of larger subunit of ribosome (505)
., 10	NO short on who has above arrives drogsnort - HIMS+ bro
*	
. A .	Traganizary Artin
1	Elongation: 13 steps: i) tRNA binding at A-site.
	ii) Peptide bond formation.
	(ii) Rébosome translocation.
	and agralde
i	LOUIS AND A CONT.
*	iniator tRNA is at p-site, and tRNA comes to A site, facilitated
	by EF-TU using GITP
	Espara Lesia biolinia Anglo I per occido de la como
€	GITP hydrolysed, EF-TU-GIDP is released, which enters
4	EF-TS cycle.
	[12.5] Man pilled a pilled of the graph of t
20	그리트 마르트 그는 그는 그는 그는 그는 그는 그는 그는 그는 그를 가는 때문에 가는 그를 가는 것이 되었다. 그는 그를 모르는
îi)	Amino acid present in tRNA of p-site dorms peptide bond with
*	
	aminoacid of tRMA in Asite, catalysed by peptidyltransferase.
ni)	Ribosome translocation:
- 111/	Both large & small subunit, now bound together, more one codon
	ahead in 5'-3' direction on mRNA.
	A NOALO UT 3

* dipeptide +-RNA appears on P-site, next codon somes to A-site, unchanged / already used tRNA leave through E-site into ay to sol. * Transocase enzyme changes 3Dstructure of ribosome and aids 5'-3' movement. (repeats) This process continues till termination. Termination * Triggered by any 1 of these Stop codons: [UAG, UGA, UAA] which are recognised only by release factors RF1 & RF2. RF1: UAG & UAA RF2: UGA & UAA * Release factor binds to A-site, release of polypeptide chain from P-site, allowing tistochion dissociation of ribosomes subunit * After multiple translations, mRNA is degraded, nucleotides are reused in transcriptional reactions.