

# Online Study Chat Group: 5/13/09, 9 – 10 PM

## Protein Synthesis

9:00:41 PM Brielle LH: Hello

9:00:52 PM Annie Chien: hi

9:00:53 PM Angela R: hi

9:01:36 PM Annie Chien: where is everyone

9:01:51 PM Angela R: here

9:02:40 PM Annie Chien: is anyone else planning on being here

9:02:45 PM Annie Chien: should we wai

9:02:46 PM Annie Chien: t

9:02:50 PM Angela R: idk

9:02:52 PM Brielle LH: Well Olivia Was Just On

9:03:04 PM Brielle LH: Idk What She's Doing

9:03:12 PM Annie Chien: can someone text the others to say we are on

9:05:58 PM Stepha Mariapen: hi all

9:06:21 PM Annie Chien: ok are you ALL ready

9:06:29 PM Stepha Mariapen: yes

9:06:36 PM Angela R: meli will be on in a few minutes

9:06:37 PM Annie Chien: Where does transcription and translation occur?

9:06:51 PM Annie Chien: THANKS ANGELA

9:07:07 PM Stepha Mariapen: transcription-cytoplasm/ribosome

9:07:16 PM Stepha Mariapen: translation-nucleus

9:07:18 PM Annie Chien: NOOO!

9:07:23 PM Stepha Mariapen: opposite

9:07:23 PM Brielle LH: backwards

9:07:26 PM Angela R: yea

9:07:37 PM Stepha Mariapen: brain freeze

9:07:38 PM Annie Chien: GOOD

9:07:39 PM Angela R: transcrip nucleus

9:07:42 PM Brielle LH: lol

9:07:43 PM Angela R: uh huh

9:07:51 PM Stepha Mariapen: im eating ice cream

9:07:52 PM Annie Chien: Which enzyme is involved in the construction of mRNA during transcription?

9:08:01 PM Brielle LH: polymerase?

9:08:05 PM Angela R: yea

9:08:07 PM Annie Chien: WHICH ONE

9:08:08 PM Brielle LH: guess

9:08:08 PM Angela R: i think

9:08:11 PM Stepha Mariapen: RNa

9:08:16 PM Annie Chien: GOOD STEPHA

9:08:17 PM Stepha Mariapen: polymerase one

9:08:23 PM Annie Chien: YES

9:08:30 PM Brielle LH: whatever

9:08:31 PM Annie Chien: What part of tRNA does the codon bond with?

9:08:33 PM Brielle LH: i started that  
9:08:39 PM Brielle LH: anti codon  
9:08:40 PM Brielle LH: ?  
9:08:42 PM Brielle LH: ?  
9:08:46 PM Annie Chien: YES  
9:08:49 PM Brielle LH: yea!!  
9:08:53 PM Brielle LH: another guess  
9:09:14 PM Annie Chien: HOLD ON  
9:09:16 PM Brielle LH: :-)  
9:09:23 PM Stepha Mariapen: okay.  
9:09:24 PM Annie Chien: What is a product of the gene?  
  
9:09:36 PM Stepha Mariapen: beats me  
9:09:43 PM Stepha Mariapen: protein  
9:09:44 PM Stepha Mariapen: ?  
9:09:50 PM Brielle LH: yea  
9:09:51 PM Annie Chien: YES  
9:10:13 PM Brielle LH: cuz thats what this is changing genes to proteins  
9:10:22 PM Annie Chien: What is needed to terminate translation?  
9:10:47 PM Brielle LH: ribosome?  
9:10:53 PM Brielle LH: i'm guessing  
9:10:59 PM Annie Chien: THATS ONE  
9:11:02 PM Brielle LH: yea!!!  
9:11:10 PM Brielle LH: i'm awesome  
9:11:13 PM Annie Chien: THERE IS AT LEAST ONE MORE  
9:11:24 PM Stepha Mariapen: something about termination site  
9:11:30 PM Annie Chien: LOOK AT YOUR NOTES  
9:11:36 PM Brielle LH: is E site one?  
9:11:39 PM Stepha Mariapen: getting off at the bus stop  
9:11:39 PM Brielle LH: or no?  
9:11:46 PM Annie Chien: YEAH WELL WHAT DO YOU NEED  
9:11:55 PM Brielle LH: codons?  
9:12:00 PM Brielle LH: anticodons?  
9:12:01 PM Stepha Mariapen: ummm....TERMINATION CODON  
9:12:06 PM Annie Chien: STEPHA YES  
9:12:09 PM Annie Chien: AND THEN WHAT ELSE  
9:12:27 PM Stepha Mariapen: and then a release factor  
9:12:32 PM Annie Chien: STEPHA YES  
9:12:35 PM Brielle LH: what's that?  
9:12:50 PM Annie Chien: FACTORS AND COMPLEXES  
9:12:50 PM Stepha Mariapen: an enzyme that fills the place of the codon  
9:12:55 PM Annie Chien: AND THEN WHAT DOES IT DO?  
9:12:57 PM Stepha Mariapen: telling it to stop  
9:13:04 PM Annie Chien: AND THEN  
9:13:05 PM Brielle LH: ooo  
9:13:07 PM Brielle LH: ok  
9:13:07 PM Annie Chien: HOP OFFFFF

9:13:15 PM Brielle LH: woow ms chien!!

9:13:18 PM Stepha Mariapen: lol

9:13:24 PM Brielle LH: *yu just told us to hop off?*

9:13:25 PM Brielle LH: lol

9:13:37 PM Stepha Mariapen: or the mRNA hops off the ribosome?

9:13:50 PM Annie Chien: USE THE AMINO ACID/CODON CHART TO ANSWER THE QUESTION:  
What is the codon for tryptophan

9:13:56 PM Annie Chien: STEPHA

9:13:57 PM Annie Chien: NO

9:14:06 PM Annie Chien: THE TRNA

9:14:18 PM Stepha Mariapen: oh i thought it was guyana

9:14:23 PM Stepha Mariapen: my sister

9:14:37 PM Stepha Mariapen: i dont have my notes

9:14:47 PM Annie Chien: <http://bioephemera.com/wp-content/uploads/2007/03/image003.jpg>

9:15:21 PM Stepha Mariapen: UGG

9:15:45 PM Stepha Mariapen: ??

9:15:46 PM Annie Chien: GIVE ME THE CODON FOR A PROMOTER

9:15:49 PM Annie Chien: STEPHA YES

9:16:31 PM Stepha Mariapen: a codon for a promoter?

9:16:35 PM Annie Chien: YES

9:16:42 PM Annie Chien: <http://bioephemera.com/wp-content/uploads/2007/03/image003.jpg>

9:16:44 PM Annie Chien: USE THE CHART

9:17:02 PM Stepha Mariapen: AGG?

9:17:05 PM Brielle LH: *how do we kno which is a promoter?*

9:17:25 PM Brielle LH: *aug?*

9:17:26 PM Annie Chien: THINK ABOUT THE JOB OF A PROMOTER

9:17:31 PM Annie Chien: BRIELLE YES

9:17:33 PM Brielle LH: *yea!!*

9:18:33 PM Brielle LH: *cuz on the chart below the big chart with the circle it says start next to methionine and then i just found the codon*

9:18:36 PM Annie Chien: WHAT IS THE DIFFERENCE BETWEEN THE SENSE AND ANTISENSE STRANDS?

9:18:47 PM Brielle LH: *that idk*

9:18:55 PM Stepha Mariapen: 5'-3'

9:18:59 PM Stepha Mariapen: 3'-5'

9:19:00 PM Annie Chien: WHICH ONE

9:19:09 PM Brielle LH: *antisense is 5-3 right?*

9:19:15 PM Brielle LH: *and sense is 3-5?*

9:19:18 PM Stepha Mariapen: 5'-3' is antisense and 3' to 5' is sense

9:19:23 PM Annie Chien: STEPHA YES

9:19:23 PM Brielle LH: *yea!!*

9:19:29 PM Brielle LH: *i just said that*

9:19:35 PM Annie Chien: WHICH STRAND DOES THE RNA POLYERMASE READ?

9:19:56 PM Brielle LH: 5-3

9:19:58 PM Stepha Mariapen: GO HOME

9:20:02 PM Brielle LH: *antisense*

9:20:06 PM Annie Chien: BRIELLE YES

9:20:09 PM Brielle LH: *yea!!*

9:20:24 PM Annie Chien: IDENTIFY 2 TYPES OF RNA, AND DEFINE THEIR ROLES

9:20:33 PM Brielle LH: *trna and mrna*

9:20:43 PM Brielle LH: *transfer and messenger*

9:20:44 PM Annie Chien: WHAT ARE THEIR ROLES

9:20:50 PM Annie Chien: TAHTS NOT GIVING ME MUCH

9:20:55 PM Brielle LH: *i know that*

9:20:59 PM Brielle LH: *i'm thinking*

9:21:12 PM Stepha Mariapen: mRNA transfers a message and tRNA has amino acids to make a protein out of that message

9:21:31 PM Annie Chien: OK

9:21:34 PM Brielle LH: *i love how u spelled message steph*

9:21:36 PM Brielle LH: *lol*

9:21:41 PM Stepha Mariapen: lol

9:22:15 PM Brielle LH: *where is every1 else?*

9:22:26 PM Brielle LH: *i feel like it's just me and you steph*

9:22:28 PM Annie Chien: SHRUGGLES

9:22:29 PM Stepha Mariapen: i know just leave us hanging

9:22:40 PM Angela R: i was getting cereals

9:22:41 PM Stepha Mariapen: it is just me and you

9:22:51 PM Brielle LH: *well angela is back*

9:22:56 PM Stepha Mariapen: took u a long time angela

9:22:58 PM Stepha Mariapen: lol

9:23:00 PM Brielle LH: *where's jes?*

9:23:22 PM Angela R: she said she was jus t gunna watch

9:23:29 PM Stepha Mariapen: ohh

9:23:29 PM Annie Chien: WHAT IS THE CODON FOR LYSINE

9:23:32 PM Angela R: she came back from the hospital

9:24:06 PM Stepha Mariapen: AAG

9:24:12 PM Annie Chien: GOOD STEPHA

9:24:32 PM Annie Chien: WHAT IS THE DIFFERENCE IN THE PROTEIN SYNETHSIS OF EUKARYOTIC AND PROKARYOTIC CELLS?

9:24:50 PM Stepha Mariapen: introns

9:25:01 PM Annie Chien: EH?

9:25:16 PM Annie Chien: ONE WORD ANSWERS DOES NOT GET MARKS!

9:25:34 PM Brielle LH: *eukaryotic cells have them and prokaryotic dont?*

9:25:37 PM Stepha Mariapen: eukaryotes have to take out introns but prokaryotes don't because they dont have any so its faster

9:25:47 PM Brielle LH: *Meli!!*

9:25:48 PM Annie Chien: STEPHA YES

9:26:04 PM Annie Chien: DESCRIBE THE 4 PROCESS OF TRANSLATION

9:26:05 PM Brielle LH: *you know ms chien.....u dont listen to me even on aim*

9:26:05 PM Stepha Mariapen: hi valentine

9:26:16 PM Melissa M: hii

9:26:19 PM Melissa M: valentine!

9:26:22 PM Stepha Mariapen: intiation-str\art codon

9:26:38 PM Angela R: elongation

9:26:50 PM Angela R: translocation



9:32:29 PM Annie Chien: lets start with initiation again

9:32:34 PM Angela R: that one

9:32:37 PM Angela R: ?

9:32:40 PM Angela R: initiation?

9:32:44 PM Annie Chien: yes

9:32:59 PM Stepha Mariapen: Initiation- when the START CODON begins the process of translation

9:33:04 PM Annie Chien: ok

9:33:11 PM Annie Chien: next phase is \_\_\_\_\_?

9:33:16 PM Angela R: elongatino

9:33:21 PM Brielle LH: *elongation*

9:33:24 PM Annie Chien: someone define that

9:33:56 PM Brielle LH: *elongation=elongate=make longer=stretch*

9:34:36 PM Stepha Mariapen: Elongation is when mRNA attaches to the ribosome and the protein elongates?

9:34:48 PM Annie Chien: i see at least 3 things in the notes on elognation

9:34:56 PM Stepha Mariapen: fine ill get them

9:35:33 PM Brielle LH: *h.o. my computer is downloading*

9:35:41 PM Brielle LH: *but its still slow*

9:35:47 PM Annie Chien: elongation!?!?!?

9:35:50 PM Stepha Mariapen: amino acids bought to by tRNA to the ribosome

9:36:14 PM Annie Chien: ok

9:36:36 PM Stepha Mariapen: Proteins called elongation factors "enzymes" assist in building tRNAs to mRNA codons at A site

9:36:41 PM Annie Chien: ok

9:36:50 PM Brielle LH: *translocation?*

9:36:50 PM Stepha Mariapen: The process continues to P and E site

9:37:13 PM Stepha Mariapen: Translocation movement of tRNA

9:37:16 PM Annie Chien: and what happens at termination?

9:37:42 PM Stepha Mariapen: Termination- Termination codon ends it and release factor fills the place

9:37:49 PM Annie Chien: ok

9:37:53 PM Annie Chien: good

9:37:56 PM Stepha Mariapen: so tRNAS will stop binding onto the mRNA

9:38:01 PM Annie Chien: SO NOW YOU KNOW YOU HAVE TO STUDY THAT

9:38:25 PM Stepha Mariapen: werd

9:38:37 PM Brielle LH: *i have the slowest computer on the face of the earth!!!*

9:38:56 PM Annie Chien: WHAT IS THE ONE GENE-ONE POLYPEPTIDE HYPOTHESIS

9:39:01 PM Annie Chien: YOU CAN GUESS THIS ONE WITHOUT LOOKING

9:39:14 PM Brielle LH: *each gene has one polypeptide*

9:39:25 PM Annie Chien: NO

9:39:25 PM Brielle LH: *that attaches to it?*

9:39:28 PM Annie Chien: NOOOOOOOOOOOOOOOOOOOOO

9:39:32 PM Brielle LH: *i guessed*

9:39:36 PM Brielle LH: *i wasnt here*

9:39:38 PM Brielle LH: lol

9:39:43 PM Annie Chien: STOP GUESSING! MAKE EDUCATED GUESSING!

9:39:49 PM Brielle LH: *u said guess so i guessed*

9:39:49 PM Stepha Mariapen: from each gene one polypeptide is made out of proteins?

9:39:52 PM Annie Chien: \*&(^\*(^%^&\$^&%#&\$%#%\$^#

9:39:59 PM Stepha Mariapen: no

9:40:00 PM Brielle LH: unnecessary

9:40:06 PM Angela R: lol

9:40:07 PM Stepha Mariapen: NO STEPHA

9:40:16 PM Annie Chien: HOW IS POLYPEPTIDES RELATED TO PROTEINS

9:40:37 PM Angela R: many polypeptides make amino acids making proteins??

9:40:43 PM Annie Chien: NOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

9:40:45 PM Angela R: lol

9:40:47 PM Angela R: idk

9:40:47 PM Brielle LH: polypeptides make up proteins?

9:40:49 PM Annie Chien: POLYPEPTIDES = PROTEINS

9:40:53 PM Annie Chien: REMEMBER???????

9:40:56 PM Brielle LH: oo yea

9:40:56 PM Angela R: same things

9:40:59 PM Angela R: hahah

9:41:02 PM Stepha Mariapen: NO MS.CHIEN

9:41:03 PM Melissa M: ohh

9:41:05 PM Annie Chien: SO ANSWER THIS AGAIN: HOW IS POLYPEPTIDES RELATED TO PROTEINS

9:41:12 PM Melissa M: theyre the same thing

9:41:12 PM Angela R: they are proteins

9:41:13 PM Brielle LH: they are the same

9:41:17 PM Stepha Mariapen: they are the same thing

9:41:19 PM Stepha Mariapen: late

9:41:20 PM Annie Chien: DUH.

9:41:22 PM Angela R: lol

9:41:23 PM Angela R: ok

9:41:36 PM Stepha Mariapen: next question that wasnt taught

9:41:36 PM Annie Chien: HOW IS POLYPEPTIDES RELATED TO PROTEINS

9:41:37 PM Brielle LH: so one gene is used to make one protein?

9:41:39 PM Angela R: arnt amino acids made up of polypeptides??

9:41:42 PM Annie Chien: WAIT FORGET IT

9:41:46 PM Annie Chien: ANGELA YES

9:42:02 PM Annie Chien: SO ANSWRR THIS QUESTION AGAIN: EXPLAIN THE HYPOTEHSIS, "ONE GENE-ONE POLYPEPTIDE"

9:42:06 PM Angela R: ok then, i was still right on my first gues

9:42:20 PM Brielle LH: so one gene is used to make one protein?

9:42:34 PM Annie Chien: BRIELLE YES

9:47:12 PM Annie Chien: OK IM BACK

9:47:13 PM Angela R: watever

9:47:15 PM Angela R: hi

9:47:22 PM Brielle LH: come on ms chien

9:47:25 PM Brielle LH: more questions

9:47:37 PM Brielle LH: más preguntas

9:47:43 PM Stepha Mariapen: next question?

9:48:12 PM Annie Chien: DESCRIBE HOW THE STRUCTURE OF RIBOSOMES SUPPORT ITS FUNCTION

9:48:13 PM Brielle LH: now the ppt wants to download

9:48:32 PM Brielle LH: somethin about large subunit and small subunit

9:48:35 PM Brielle LH: lol

9:48:42 PM Stepha Mariapen: two subunits so the mRNA can pass through

9:49:19 PM Annie Chien: GOOD STEPHA, WHAT ELSE

9:49:27 PM Stepha Mariapen: and so the protein can be sythesized out

9:49:39 PM Annie Chien: TOO GENERAL, GIVE ME MORE DETAILS

9:49:43 PM Annie Chien: WHICH PART DOES WHAT

9:50:16 PM Angela R: apwe

9:50:18 PM Angela R: ape...

9:50:21 PM Stepha Mariapen: the small subunit covers the mRNA and the large subunit is the "base"

9:50:24 PM Stepha Mariapen: ?

9:50:30 PM Annie Chien: AND THEIR FUNCTIONS?

9:50:48 PM Stepha Mariapen: angela?

9:51:39 PM Annie Chien: STILL WAITING!!!!!!!!!!!!!!!!!!!!!!!!!!!!

9:51:45 PM Stepha Mariapen: A- where the anticodon matches with the codon

9:51:51 PM Angela R: lol

9:51:52 PM Annie Chien: WHERE?

9:51:53 PM Annie Chien: WHAT?

9:52:01 PM Angela R: sorry .. im watching lil rascals

9:52:31 PM Annie Chien: 8 MINUTES UNTIL I LOG OFF TO TAKE OUT THE GARBAGE

9:52:32 PM Annie Chien: !

9:52:37 PM Annie Chien: LET'S GET CRACKING!

9:52:53 PM Stepha Mariapen: who were you talking to for an explanation

9:52:56 PM Brielle LH: really ms chien?? ur gonna leave us for garbage?

9:52:58 PM Annie Chien: EVERONE

9:53:11 PM Stepha Mariapen: no what do u want us to explain

9:53:24 PM Annie Chien: YES, IM LEAVING YOU FOR GARBAGE. I CAN NOT STAND THE SMELL OF GARBAGE IN MY HOUSE SO I NEED TO ELIMINATE IT

9:53:24 PM Stepha Mariapen: the large and small subunits

9:53:44 PM Angela R: lol

9:53:48 PM Annie Chien: YES BUT YOU ARE NOT TELLING ME HOW ITS STRUCTURE SUPPORTS ITS FUNCTION

9:54:15 PM Annie Chien: GOT TO DESCRIBE

9:54:43 PM Stepha Mariapen: its structure support the function because the large subunits hold it in place while the small subunit covers it so tRNAs can come in and out

9:54:57 PM Annie Chien: OK KEEP GOING THERE ARE MORE

9:55:06 PM Stepha Mariapen: producing a protein out of the ribosome

9:55:10 PM Annie Chien: HOW

9:55:14 PM Annie Chien: HOW DOES EACH UNIT SUPPORT THAT

9:55:31 PM Brielle LH: A site binds to the amino acid

9:55:37 PM Stepha Mariapen: when the tRNA enters it is held in place by the mRNA

9:55:46 PM Brielle LH: P binds to the protein being synthesized

9:55:49 PM Stepha Mariapen: anticodon-codon match

9:56:15 PM Annie Chien: STEPHA AND BRIELLE GOOD, BUT GOT TO BE COMPLETE THOUGHTS - ONLY THOSE WILL MAKE MARKS!

9:56:33 PM Brielle LH: E binds a free trna

9:56:40 PM Brielle LH: *before it leaves the ribosome*

9:56:47 PM Annie Chien: WHAT?

9:56:51 PM Annie Chien: WHAT ARE YOU TALKING ABOUT

9:56:58 PM Stepha Mariapen: the amino acid on the end is released to form a protein stemming out of the ribosome

9:57:07 PM Annie Chien: GOOD STEPHA

9:57:24 PM Stepha Mariapen: constantly being held by the tRNA entering the ribosome

9:57:38 PM Annie Chien: WHAT IS THAT?

9:57:43 PM Annie Chien: WHATS CONSTATLY HELD

9:57:47 PM Annie Chien: COMPLETE THOUGHTS!

9:58:04 PM Stepha Mariapen: the strand of amino acids or you can say the protein

9:58:06 PM Stepha Mariapen: ??

9:58:37 PM Annie Chien: THE AMINO ACIDS THAT ARE BEING STRINGED ARE HELPED BY THE LARGER SUBUNIT OF THE RIBSOOME

9:58:58 PM Annie Chien: TAHTS WHY ITS THE LARGER SUBUNIT, AND WHY IS ON THE TOP OF THE SMALL SUBUNIT

9:59:03 PM Stepha Mariapen: oh okay

9:59:25 PM Brielle LH: *ok*

9:59:34 PM Annie Chien: THERE IS MORE

9:59:41 PM Annie Chien: TELL ME ABOUT THE SMALL SUBUNIT

9:59:58 PM Stepha Mariapen: i thought i answered this

10:00:09 PM Annie Chien: BUT YOU DIDNT COMPLETE YOUR THOUGHTS ON APE

10:00:37 PM Annie Chien: !

10:00:38 PM Stepha Mariapen: A- site where anticodon and codon match

10:00:40 PM Annie Chien: YOU GUYS ARE KILLING ME

10:00:43 PM Annie Chien: OK

10:00:47 PM Annie Chien: GOOD STEFA

10:00:55 PM Stepha Mariapen: P- when the amino acid is released from the tRNA

10:01:09 PM Stepha Mariapen: E- where spent tRNA is recycled

10:01:16 PM Annie Chien: OK

10:01:20 PM Annie Chien: GOOD

10:01:24 PM Annie Chien: OK ITS 10

10:01:26 PM Annie Chien: GOT TO GO

10:01:30 PM Stepha Mariapen: adios

10:01:31 PM Annie Chien: GARBAGE TIME

10:01:34 PM Brielle LH: *whatever ms chien*

10:01:36 PM Brielle LH: *bye*

10:01:37 PM Annie Chien: DO THE HOMEWORK - IT CAN HELP YOU

10:01:40 PM Stepha Mariapen: take out trash

10:01:46 PM Stepha Mariapen: bye

10:01:56 PM Brielle LH: *why doesnt mr kilpatrick take it out?*

10:02:05 PM Annie Chien: WE BOTH ARE TAKING IT OUT

10:02:11 PM Brielle LH: *haha*

10:02:17 PM Annie Chien: ITS FASTER

10:02:24 PM Annie Chien: AND HE TAKES OUT THE HEAVIER STUFF

10:02:27 PM Stepha Mariapen: losers

10:02:35 PM Annie Chien: THIS WAY I CAN GET AWAY WITH TAKING OUT AS LITTLE AS I CAN

10:02:36 PM Brielle LH: *lah-whoo-zi-errs*

10:02:43 PM Brielle LH: *woow ms chien*  
10:02:50 PM Stepha Mariapen: y do u take it out at all  
10:02:55 PM Stepha Mariapen: its dark  
10:02:59 PM Stepha Mariapen: u can get jumped  
10:03:01 PM Stepha Mariapen: lol  
10:03:02 PM Annie Chien: LOL  
10:03:04 PM Brielle LH: *lol*  
10:03:08 PM Brielle LH: *by my pplz*  
10:03:10 PM Brielle LH: *lol*