

ONLINE REVIEW CHAT: IB BIOLOGY HL JUNIORS

November 30th, 2009, 9 – 10

TOPIC: Proteins

9:04:23 PM MsChien: invite other folks amaddie

9:05:18 PM MsChien: WELCOME! This is our online study session. It will be copy and pasted later to be published on mschien.com for your viewing later. SO: (1) keep it clean and respectful, because I can use anything you say against you later :-D (2) ask questions and help ANSWER questions (3) We will have only one hour, so make it good. Any individual issues should be addressed before or after the chat.

HOW THIS WORKS: MsChien will ask a question, and you should answer. You dont have to "raise your hand" or anything, just answer. She will let everyone know who got the problem correct or not. After this, you can ask a related question, and someone (or folks) in the group can then answer.

9:06:11 PM Sam: word

9:06:17 PM Sarah: yeppers

9:06:48 PM MsChien: ok ready to start

9:07:04 PM Rachel: yes

9:07:06 PM MsChien: ***Outline how an enzyme works. ***

9:08:06 PM Rachel: they attach to a substrate and speeds up the reaction.

9:08:18 PM Adam: an enzyme catalyzes biological reactions by breaking down substrates and lowering the activation energy for reactions, as any catalyst does

9:08:44 PM MsChien: ADAM GOOD

9:08:50 PM MsChien: ANYONE ELSE WANTS TO ADD

9:08:54 PM Rachel: i did

9:09:08 PM Rachel: read the one before adams

9:09:15 PM Sarah: sorry what's the question? computer's being stupid...

9:09:33 PM MsChien: RACHEL GOOD - ADD MORE

9:09:35 PM MsChien: ***Outline how an enzyme works. ***

9:09:48 PM Sam: acts as a catalyst for biological and chemical reactions in the body, breaking down substrates in the body that can properly be utilized

9:10:01 PM MsChien: SAM - GOOD, BUT JUST BREAKING DOWN?

9:10:08 PM Rachel: it is also not consumed in the process

9:10:29 PM Adam: enzymes also can form substrates together

9:10:30 PM Rachel: and releases an end product witha lower activation energy

9:10:31 PM MsChien: SAM: ENZYMES ONLY BREAK DOWN SUBSTRATES

9:10:35 PM MsChien: RACHEL: GOOD

9:10:37 PM Sarah: and it's globular-- fibrous don't do the metabolic reaction thing

9:10:58 PM MsChien: SARAH - YES

9:11:00 PM Sarah: wait since when do they only break them apart?

9:11:14 PM MsChien: SARAH -- THAT WAS MY QUESTION TO SAM

9:11:32 PM Sam: no they can make products to

9:11:49 PM Rachel: whats an example?

9:11:59 PM MsChien: RACHEL GOOD QUESTION - ANYONE?

9:12:10 PM Sarah: lactase

9:12:16 PM Sam: no idea

9:12:24 PM Sarah: breaks down lactose into fructose and glucose

9:12:31 PM MsChien: SARAH, EXCELLENT

9:12:31 PM Adam: lactase breaks down glucose and galactose to be used by the body

9:12:36 PM Sarah: galactose that's what i meant =0

9:12:37 PM Sam: we didn't go over any enzymes that deal with anabolic reactions

9:12:44 PM Sam: do we need to know that

9:13:16 PM Rachel: is zymase one also?

9:13:23 PM MsChien: WE WE TECHNICALLY DID - HYDROLYSIS

9:13:31 PM MsChien: RACHEL : YES

9:13:39 PM Sarah: what's the difference between anabolic and catabolic?

9:13:45 PM Sam: Yeah but thats no an enzyme just a type of reaction

9:13:58 PM MsChien: SAM: ALL CHEMICAL REACTIONS HAVE AN ENZYME

9:14:05 PM Sam: catabolic is breaking down and anabolic is the bonding to form a larger molecule

9:14:13 PM MsChien: SAM: GOOD

9:14:16 PM Sam: really? didn't know

9:14:25 PM Rachel: anabolic binds together to make a larger molecule and catabolic breaks them apart

9:14:41 PM Sarah: ok thanks rachel

9:14:51 PM MsChien: SAM: YES, WHEN YOU LEARN ORGANIC CHEMISTRY IN COLLEGE, YOU WILL SEE

9:15:42 PM Rachel: next question?

9:15:52 PM Adam: jeez impatient

9:15:53 PM Sam: Your procrastinating ms. chien

9:16:08 PM Sam: i want to learn now when my brain is at its prime

9:16:09 PM MsChien: GEEZ

9:16:20 PM Sarah: lol

9:16:39 PM MsChien: OHHH AN EXAMPLE OF COMPETITIVE INHIBITOR: HIV

9:16:54 PM MsChien: **How are the following related: Noncompetitive inhibitors, competitive inhibitors and allosteric regulators.***

9:16:55 PM Adam: got it

9:17:02 PM Sam: what about full blown AIDS?

9:17:05 PM Sarah: a virus can be an inhibitor?

9:17:26 PM Rachel: allosteric regulators are non competitive inhibitors

9:17:35 PM Adam: they all are things that affect enzymatic reactions, stopping them from occurring

9:17:35 PM MsChien: RACHEL GOOD

9:17:50 PM Sam: but there are beneficial because they stop the body from producing too much of one substance

9:18:07 PM Adam: only allosteric

9:18:15 PM Sam: yeah

9:18:15 PM Sarah: allosteric regulators are noncompetitive inhibitors in which the product of a reaction acts as the inhibitor to stop the reaction

9:18:23 PM MsChien: SAM: GOOD

9:18:41 PM MsChien: HOW DOES ALL THIS RELATE TO MAINTAINING BODY HOMEOSTASIS?

9:19:02 PM Sam: non-competitive inhibitors change the shape of the active site, while competitive inhibitors resemble the substrate blocking other substrates from being broken down

9:19:17 PM Sam: inhibitors=death

9:19:18 PM Rachel: so that not too much of one thing is produced like c02

9:19:22 PM Maddie: allosteric regulators stop reactions keeping the body at homeostasis

9:19:24 PM Sarah: if too much product's being formed, allosteric regulation happens to stop the reaction

9:19:49 PM Sam: allurstorix regulation helps with homeostasis because potentially toxic substances and maintained at a low level

9:19:57 PM Maddie: inhibitors dont equal death

9:19:57 PM MsChien: SARAH: HIV MIMICS OUR RNA TO TRICK OUR CELLS TO REPRODUCE THEMSELVES

9:20:01 PM Sarah: then if more product is needed the inhibitor detactches itself

9:20:06 PM MsChien: SAM: EXCELLENT

9:20:11 PM MsChien: MADDIE: AMEN!

9:20:23 PM Sam: yes they do

9:20:25 PM Maddie: no

9:20:51 PM Maddie: allosteric regualtors are non competitive INHIBITORS!

9:20:51 PM MsChien: SARAH: THE HIV HAS MIMICS MORE OF THE ENZYMES THAT GOES ALONG WTH DNA REPLICATION

9:20:55 PM Sam: sarin gas equals paralysis, and with machines keeping you alve your dead so excuse me

9:21:07 PM MsChien: SAM: WHAT ABOUT HEMOGLOBIN

9:21:09 PM Sam: inhibitors-machines to keep you alive= death

9:21:14 PM Maddie: no

9:21:17 PM Adam: well allestoric reactions are good and they are inhibitors

9:21:19 PM Sarah: but allosteric regulation's helpful

9:21:22 PM Maddie: not all inhibitors are bad

9:21:22 PM Sarah: yeah

9:21:26 PM Adam: bam

9:21:31 PM Sam: no they aren't we went over this

9:21:32 PM Maddie: suck on that

9:21:35 PM Maddie: they are

9:21:39 PM Sam: they are filanges or whatever

9:21:42 PM Sam: not ihibitors

9:21:45 PM MsChien: WHAT????

9:21:45 PM Rachel: they dint always equal death

9:21:51 PM Rachel: dont*

9:21:58 PM Maddie: they are inhibitors

9:22:11 PM Sarah: no no the langes or whatever are just the thing that binds to a site

9:22:14 PM Maddie: because they stop they reaction

9:22:19 PM Sarah: doesn't have to have anything to do with allo0steric at al;

9:22:24 PM Sam: yeah but im distinguishing harmful inhibitors from those in allostric regulation

9:22:25 PM Adam: the product of an allestoric rection becomes the inhibitor, stopping the reaction from occurring any more

9:22:36 PM Sam: harmful inhibitors- machines to keep you alive= death

9:22:37 PM MsChien: I THINK WE ARE ALL TALKING ABOUT THE SAME THING

9:22:41 PM Maddie: there you go

9:22:50 PM MsChien: ARE YOU GUYS ARGUING FOR THE SAKE OF ARGUING?

9:22:52 PM Sam: no the product from a metabolic pathway

9:23:05 PM Sam: acts a inhibitor but its called something else

9:23:09 PM Sam: with an l

9:23:11 PM Maddie: no

9:23:12 PM Sam: *L

9:23:14 PM Sam: yes

9:23:20 PM Maddie: its still an inhibitor

9:23:24 PM Maddie: no acting needed

9:23:25 PM MsChien: ANOTHER EXAMPLE OF ALLOSTERIC INHIBITOR:
ANTIDEPRESSANTS

9:23:28 PM Sam: okay but as i said

9:23:40 PM MsChien: VALIUM

9:23:45 PM Sam: harmful inhibitors- machines to keep you alive= death

9:23:52 PM Maddie: whats that do? valium?

9:23:54 PM Sam: Valium what is that

9:24:01 PM Sam: agreed tell us me chien

9:24:09 PM ANISA: Hi!

9:24:10 PM Sarah: is that in antidepressants?

9:24:22 PM MsChien: <http://en.wikipedia.org/wiki/Diazepam>

9:24:28 PM Rachel: i thought that was seretonin

9:24:35 PM Maddie: thats antidepressants

9:24:36 PM MsChien: NO VALIUM IS NOT AN ANTISEPRESANT

9:24:41 PM Maddie: what is it?

9:24:41 PM Sarah: so that would be a yes

9:24:47 PM Sarah: no?

9:24:54 PM Sarah: wait that's what wikipedia says though kinda

9:25:04 PM Sam: thats the dream i was talking about with derivatives i think it was valium

9:25:13 PM Sam: which is weird considering i didn't know what valium was

9:25:17 PM MsChien: ITS A RELAXANT

9:25:25 PM Sam: a pain killer

9:25:26 PM Maddie: okay, that makes sense.

9:25:36 PM MsChien: Diazepam is mainly used to treat anxiety, insomnia, and symptoms of acute [alcohol](#) or [opiate withdrawal](#). It is also used as a [premedication](#) for inducing sedation, anxiolysis or amnesia before certain medical procedures

9:25:39 PM MsChien: SAM: YS

9:25:40 PM Sam: its made from the same thing as heroine and opium

9:25:45 PM Sarah: and it's an allosteric inhibitor?

9:25:46 PM MsChien: SAM: YES

9:26:08 PM MsChien: NON COMPETITIVE

9:26:11 PM MsChien: INHIBITOR

9:26:18 PM Sarah: but not allosteric?

9:26:22 PM MsChien: NO

9:26:27 PM Sam: which is why the insurance companies should of bought all the poppie coming out of afghanistan when we went in instead of letting be sold to the black makjet

9:26:33 PM Sam: sell it as valium

9:26:36 PM Sam: makes sense

9:27:11 PM MsChien: ***READY FOR THE NEXT QUESTION????????????????????***

9:27:14 PM ANISA: YES

9:27:16 PM Sarah: yep

9:27:18 PM Adam: yes i have to go soon

9:27:22 PM Rachel: same

9:27:23 PM Sam: i guess

9:27:25 PM MsChien: ***How are the following related: proteins, amino acids, nucleic acids, DNA?***

9:27:39 PM Sarah: amino acids make up DNA

9:27:45 PM Sarah: *protein not DNA

9:27:51 PM Maddie: nucleic acids make up amino acids

9:27:58 PM ANISA: nucleic acids make up amino acids

9:27:58 PM Sarah: nucleic acids make up DNA

9:27:59 PM ANISA: yeah

9:28:01 PM MsChien: SARAH GOOD

9:28:02 PM ANISA: NO

9:28:09 PM Sam: dna is made up of nucleic acids, which codes for amino acids which when bonded together through peptide bonds form proteins

9:28:15 PM MsChien: MADDIE: AND ANISA: LOOK AGAIN!

9:28:21 PM Sam: no nucleic acid makes up DNA

9:28:22 PM Maddie: darn

9:28:22 PM Adam: dna is made up of nucleotides and codes for the production of amino acids, which form together to make proteins

9:28:23 PM MsChien: SARAH: OTHER WAY AROUND

9:28:34 PM Rachel: nucleic acids make up dna which codes in the production of amino acids which bind together in peptide bonds and form proteins

9:28:37 PM MsChien: DNA IS A TYPE OF NUCLEIC ACID

9:28:43 PM MsChien: ADAM GOOD

9:28:43 PM Sam: right

9:28:53 PM Sarah: is it? oh ok

9:28:57 PM Sam: made of nucleotides that was a trick question

9:29:26 PM Sarah: ok so nucleotides make up nucleic acids

9:29:32 PM Rachel: yes

9:29:32 PM Sarah: and dna are a type of nucleic acids?

9:29:36 PM Rachel: yes

9:29:40 PM MsChien: SARAH YES

9:29:42 PM Sarah: what other types are there?

9:29:42 PM Sam: yeah

9:29:52 PM MsChien: OF ? NUCLEIC ACIDS?

9:29:55 PM Sarah: yeah

9:29:57 PM MsChien: RNA

9:29:58 PM Rachel: rna?? i think

9:30:01 PM MsChien: RACHEL GOOD!

9:30:02 PM Sarah: just RNA?
9:30:27 PM Rachel: well isnt there trna and stuff like that
9:30:34 PM Sarah: what's that?
9:30:36 PM Sam: what is rna again
9:30:38 PM Rachel: but we have not learned about that
9:30:43 PM MsChien: THERE ARE ACTUALLY MORE
9:30:52 PM MsChien: THERE ARE ACTUALLY ARTIFICIAL ONES
9:30:57 PM Rachel: yea like trna
9:31:01 PM Adam: i have to go
9:31:05 PM Sarah: what does trna do?
9:31:07 PM Sarah: bye adam!
9:31:08 PM Maddie: an alpha helix
9:31:14 PM MsChien: TRHA IS ANOTHER ONE YES
9:31:23 PM MsChien: ALL THE RNAS
9:31:27 PM ANISA: transfers information right?
9:31:29 PM MsChien: YES
9:31:34 PM MsChien: ALPHA HELIX????
9:31:48 PM Maddie: he asked what rna was
9:31:50 PM Sam: is a secondary structure of protein
9:32:10 PM MsChien: OH OK
9:32:11 PM Rachel: thats it?
9:32:14 PM Sarah: what?
9:32:57 PM Maddie: what what?
9:33:21 PM MsChien: NEW NEWS: SOME DRUGS ARE ALLOSTERIC. THIS IS BECAUSE THEY CAN PREVENT TOXICITY IN THE BODY, SO OFTEN, DOCTORS CREATE SUCH ALLOSTERIC MEDICATION FOR ITS EFFECTIVENESS
9:33:22 PM Sarah: secondary structure what?
9:33:32 PM MsChien: OR PROTEIN
9:33:44 PM Sam: Nlce
9:33:52 PM MsChien: INTERESTING EH?
9:33:57 PM Sam: yup
9:34:05 PM MsChien: ***READY FOR THE NEXT QUESTION????????????????????***
9:34:07 PM Maddie: antibiotics are right?
9:34:08 PM Rachel: yes
9:34:09 PM Sarah: prevent what kind of toxicity?
9:34:40 PM MsChien: BUILD UP OF BY-PRODUCTS OF THE MEDICATION WHEN IT IS BROKEN DOWN
9:34:48 PM MsChien: **Identify the role of nucleosomes in DNA structure. ***
9:34:59 PM Sam: what are nucleosomes?
9:35:07 PM Rachel: they hold the information
9:35:15 PM MsChien: THINK OF PACKING FOR A TRIP
9:35:15 PM Sam: oh okay
9:35:16 PM ANISA: OH IKNOW
9:35:16 PM ANISA: I THINK
9:35:20 PM ANISA: THEY ARE LIKE SPACE BAGS
9:35:21 PM Sam: like cytosine and such

9:35:25 PM MsChien: ANISA: GOOD!
9:35:33 PM MsChien: ANISA: EXPLAIN
9:35:40 PM Sam: would that count on the test spacebags
9:35:41 PM ANISA: and they take the stuff and condense it in order to fit into
9:35:43 PM ANISA: something
9:35:46 PM ANISA: I'm not quite sure
9:35:48 PM MsChien: ANISA: WHAT STUFF
9:35:51 PM Rachel: they pack together information tightly
9:35:57 PM Sam: chromosomes
9:35:58 PM MsChien: RACHEL WHAT INFO
9:36:06 PM MsChien: CHROMOSOMES ARE JUST PACKED_____?
9:36:10 PM Rachel: genes
9:36:11 PM ANISA: dna
9:36:14 PM ANISA: ?
9:36:14 PM MsChien: GOOD
9:36:16 PM Sam: CHROMOSOMES?P
SPACEBAGS

9:36:17 PM MsChien: GOOD
9:36:27 PM MsChien: NUCLEOSOMES ARE SPACEBAGS OF THE CELL
9:36:32 PM Sarah: wait so the nucleosomes do the packing?
9:36:37 PM MsChien: YES
9:36:38 PM Sam: first of all what are spacebags
9:36:45 PM MsChien: LOL
9:36:49 PM Rachel: nucleosomes
9:36:57 PM Rachel: and they pack together genes
9:37:04 PM MsChien: RACHEL: EXCELLENT
9:37:04 PM Sam: which are?
9:37:11 PM Sam: genes are what>/
9:37:12 PM Sam: ?
9:37:18 PM Rachel: hereditary info
9:37:21 PM ANISA: spacebags tightly pack a lot of things
9:37:26 PM Sarah: how do they pack them?
9:37:34 PM ANISA: so you can pack 10000000 shirts in a suitcase
9:37:34 PM MsChien: YOU VACCUUM THE AIR OUT
9:37:47 PM Rachel: in a secondary structure
9:37:50 PM Sarah: so nucleosomes are vacuums??
9:37:57 PM Rachel: no spacebags
9:37:59 PM ANISA: no,
9:38:02 PM ANISA: they're spacebags
9:38:03 PM Sarah: gyarg
9:38:04 PM Sam: there basically small black holes in the DNA

9:38:09 PM Rachel: no

9:38:11 PM Sam: *holes
9:38:13 PM Rachel: they hold info
9:38:15 PM MsChien: http://www.youtube.com/watch?v=7m0ay3CAo_k
9:38:17 PM Sam: no takes?
9:38:26 PM MsChien: http://www.youtube.com/watch?v=7m0ay3CAo_k
9:38:33 PM ANISA: AGAGA
9:38:36 PM ANISA: I love spacebags.
9:38:38 PM Maddie: hahahaha
9:38:41 PM Sarah: ???
9:38:49 PM MsChien: SARAH: SAM ASKED WHAT SPACEBAGS WERE
9:38:56 PM Sam: first of all chill with the spaceags
9:39:00 PM Sam: *space bags
9:39:07 PM Sam: i hear there out of this world
9:39:09 PM Rachel: they just pack together info
9:39:12 PM Rachel: like genes
9:39:16 PM MsChien: ***How are the following related: nitrogenous bases, DNA, phosphate group, sugar group, hydrogen bonding***
9:39:21 PM Sarah: what are they made out of?
9:39:29 PM MsChien: SAPCEBAGS?
9:39:29 PM Rachel: they make up a nulceotide
9:39:42 PM Sarah: DNA's bmade up of base sugar and phosphate group
9:39:48 PM Sarah: do they bond by hydrogen bonding?
9:39:50 PM MsChien: SARAH GOOD
9:39:53 PM ANISA: phosphate group and the nitrogenous bases bond together by hydrogen bonds, right
9:40:12 PM Rachel: nucelotides are made up of a nitorgenous base sugar and phosphate
9:40:19 PM Sarah: i was asking what nucleosomes are made out of
9:40:23 PM MsChien: ANISA: THE TWO STRANDS BOND TOGETHER VIA H-BONDING
9:40:23 PM ANISA: dna is made up of nitrogenous bases like Adenine, Cytosine, Guanine, and Thymine
9:40:28 PM Rachel: and are bonded together through hydrogen bonds
9:40:31 PM MsChien: AT THE BASES
9:40:33 PM Maddie: nitro bases bond with the phosphate group and the sugar group to make an nucleotide and bond with the other nitrogenous bases with hydrogen bonds to make dna
9:40:36 PM MsChien: ANISA GOOD
9:40:50 PM MsChien: MADDIE: GOOD
9:40:54 PM ANISA: A only bonds with T, G with C
9:41:03 PM Sarah: how do the phosphate sugar and base bond?
9:41:08 PM Rachel: and in rna t is replaced with u
9:41:21 PM MsChien: SARAH GOOD QUESTION - COVALENT BOND
9:41:23 PM Maddie: a and t with two hydro bonds. c and g with 3
9:41:24 PM ANISA: through covalent bonds
9:41:26 PM Rachel: through covalent bonds
9:41:26 PM MsChien: <http://www.youtube.com/watch?v=qy8dk5iS1f0>

9:41:28 PM ANISA: BOOM

9:41:31 PM MsChien: BOOM!

9:41:33 PM Sarah: but not condensation reaction?

9:41:33 PM Rachel: bam

9:41:54 PM Rachel: no i think

9:42:05 PM ANISA: Ms Chien this will be on your website, right?

9:42:09 PM ANISA: this chat log

9:42:16 PM Sarah: mschien? not condensation reaction?

9:42:41 PM MsChien: SARAH: WHEN YOU PUT TWO NUCLEOTIDES TOGETHER, IT WOULD BE THROUGH CONDENSATION

9:42:45 PM MsChien: ANISA: ES

9:42:46 PM MsChien: YES

9:42:56 PM ANISA: good!

9:42:57 PM MsChien: CONDENSATION IS A PROCESS

9:43:05 PM Rachel: oh ok

9:43:18 PM Rachel: so next question?

9:43:21 PM MsChien: ***What is the role of hydrolysis and condensation in proteins, carbohydrates and lipids?***

9:43:56 PM MsChien: <http://www.5min.com/Video/Dehydration-Synthesis-and-Hydrolysis-Disaccharides-150613824>

9:43:58 PM Rachel: when lipids break apart there is condensation

9:43:59 PM Sarah: amono acids bond because of it

9:44:00 PM MsChien: THATS A NICE REVIEW VIDEO

9:44:05 PM Sarah: amino to carboxyl group

9:44:28 PM Rachel: right??

9:45:01 PM MsChien: RACHEL: CONDENSATION -- RECHECK

9:45:06 PM MsChien: SARAH YES

9:45:18 PM MsChien: CONDENSATION: YOU MAKE MOLECULES, AND THEN PRODUCE WATER

9:45:22 PM Rachel: when lipids break apart it is a condensation reaction

9:45:37 PM Sarah: we're going to be tested on carbs and lipids still? i thought that was last unit?

9:45:39 PM MsChien: YOU ARE CONFUSING IT WITH HYDROLYSIS?

9:45:40 PM Rachel: oh when they combine it is a condensation reaction

9:45:49 PM Rachel: i think

9:45:56 PM MsChien: SARAH: I JUST WANT TO MAKE SURE YOU KNOW HOW TO APPLY IT WITH PROTEINS

9:45:57 PM Sarah: yeah

9:46:05 PM MsChien: RACHEL YES

9:46:09 PM Sarah: so you won't ask about lipids and carbs?

9:46:09 PM Rachel: bam

9:46:22 PM MsChien: WHATS THIS BAM

9:46:29 PM MsChien: EMERALD FANS?

9:46:31 PM Sarah: kaboom

9:46:31 PM Rachel: lol cause i got it right

9:46:47 PM Rachel: so next?

9:46:48 PM ANISA: oh ms. chien

9:46:49 PM MsChien: ***What is the difference between DNA and RNA?***

9:46:51 PM ANISA: OH

9:46:51 PM ANISA: OH

9:46:52 PM ANISA: OH

9:46:53 PM ANISA: BASES

9:47:00 PM Rachel: dna is 2 strands

9:47:00 PM Sarah: and function

9:47:05 PM Rachel: rna is 1 strand

9:47:05 PM ANISA: DNA has c, t, a g

9:47:09 PM Sarah: dna stays in cell and rna travels around

9:47:15 PM ANISA: where rna has c a g and uracil

9:47:18 PM MsChien: YEP YEP ALL CORRECT

9:47:18 PM Rachel: and rna is g,c,u,a

9:47:34 PM Rachel: dna is deoxyribose

9:47:35 PM ANISA: t is replaced with uracil

9:47:38 PM Rachel: and rna is ribise

9:47:41 PM ANISA: the sugars are different

9:47:42 PM MsChien: RNA CONTAINS THE FOLLOWING BASES... (WRITE IN COMPLETE SENTENCES!)

9:47:46 PM Sarah: ribise? what?

9:47:52 PM MsChien: ANISA: YES! HOW ARE THEY DIFFERENT!

9:48:04 PM ANISA: One is O

9:48:09 PM ANISA: the other is OH?/

9:48:09 PM MsChien: WHICH ONE

9:48:10 PM Sarah: uracil, adenine,

9:48:18 PM ANISA: mmm...DNA is OH?

9:48:25 PM ANISA: RNA is O?

9:48:27 PM Rachel: rna contains the followong bases uracil,cytosine,adenine and guanine

9:48:29 PM Sarah: what??

9:48:44 PM Sarah: k

9:48:49 PM ANISA: The sugars all have the same except for the bottom right one

9:48:53 PM ANISA: right?

9:49:02 PM MsChien: http://www.mun.ca/biology/scarr/Deoxyribose_versus_Ribose.html

9:49:10 PM Rachel: uff so many videos

9:49:11 PM MsChien: CLOSE ENOUGH

9:49:14 PM ANISA: oh its H and OH

9:49:15 PM ANISA: :)

9:49:16 PM MsChien: THATS AN IMAG

9:49:17 PM MsChien: IMAGE

9:49:28 PM Sarah: ohhh that's what you peoples were talking about1

9:49:42 PM Rachel: g and c have 3 hydrogen bonds

9:49:42 PM MsChien: ***Describe the four functions of proteins and give an example of each. ***

9:49:53 PM Sarah: enzymes like lactase

9:49:56 PM Rachel: and t and a or u and a have 2 hydrogen bonds

9:49:58 PM Sarah: muscles

9:50:12 PM Sarah: energy as last resort

9:50:12 PM MsChien: SARAH: JOB FUNCTION?

9:50:13 PM ANISA: cell signalling

9:50:19 PM ANISA: right?

9:50:19 PM Sarah: what?

9:50:24 PM MsChien: ANISA: GOOD

9:50:32 PM MsChien: SARAH: DEFINE THE FUNCTION CLEARLY

9:50:34 PM Rachel: pepsin breaks down proteins in peptides

9:50:42 PM MsChien: RACHEL YES

9:51:10 PM Sarah: for enzymes? they catalyze reactions, and reactions really couldn't exist at all without them

9:51:13 PM MsChien: GOOD

9:51:17 PM MsChien: ANYMORE?

9:51:24 PM MsChien: MUSCLES???

9:51:31 PM Rachel: zymase is often used during eye surgery and also ferment sugar onto co₂ and ethanol

9:51:47 PM Sarah: i said muscles!

9:51:50 PM Rachel: umm

9:51:52 PM MsChien: RACHEL: WHAT IS THE EXACT FUNCTION OF ZYMASE?

9:51:58 PM Sarah: no clue.

9:51:59 PM MsChien: WHAT IS THE FUNCTION OF MUSCLES?

9:52:08 PM Sarah: to move!

9:52:12 PM Rachel: umm it is yeast

9:52:14 PM MsChien: WELL STRUCTURE

9:52:22 PM Rachel: it catalyses fermentation

9:52:30 PM MsChien: ZYMASE: ALLOWS FOR CELL PERMEABILITY DURING SURGERY

9:52:32 PM Rachel: of sugar

9:52:45 PM Rachel: no that hyaluronidase

9:53:14 PM Rachel: k ms chien

9:53:22 PM MsChien: SO HOW DID YOU MIX IT WITH EYE SURGERY?

9:53:23 PM Sarah: so not fermentation?

9:53:33 PM Rachel: sorry i read the wrong part in my notes

9:53:36 PM MsChien: ZYMASE IS FOR FERMENTATION

9:53:42 PM Sarah: what catalyzes fermentation then?

9:53:46 PM Rachel: zymase is in fermentation

9:53:49 PM MsChien: HYALURONDIASE IS FOR EYE SURGERY

9:53:49 PM Sarah: it IS for it?

9:54:00 PM Sarah: i thought you said it was for cell permeability

9:54:07 PM Sarah: both?

9:54:13 PM Rachel: no she was correcting me

9:54:19 PM Rachel: it is onlt zymase

9:54:30 PM MsChien: I KNOW THEM BY FUNCTION, NOT BY NAME, SO WHEN RACHEL PUT THEM IN ONE SENTENCE I MIXED UP THE TWO

9:54:37 PM Rachel: and hyaluronidase is eye surgery

9:54:49 PM Sarah: ok sio 1 more time what exactly is zymase?

9:54:52 PM Rachel: and zymase os in fermentation

9:55:00 PM Rachel: is*

9:55:18 PM Rachel: k?

9:55:44 PM Sarah: k. so it's like yeast?

9:55:47 PM Sarah: or IS yeast?

9:55:49 PM Rachel: yes exactly

9:56:22 PM Sarah: k, zymase = yeast, gotchya

9:56:26 PM Rachel: yes

9:56:28 PM MsChien: ZYMASE IS IN YEASTS

9:56:36 PM Rachel: yup

9:56:42 PM Rachel: wrap it up ms chien

9:56:42 PM Sarah: oh IN it. k

9:56:53 PM MsChien: ***Explain the four levels of protein structure, indicating the significance of each level.***

9:57:05 PM MsChien: THATS A VERY IMPORTANT QUESTION, HINT HINT

9:57:18 PM Sarah: seconmdary, tertiary, quaternary

9:57:23 PM ANISA: primary

9:57:30 PM Maddie: the tertiary is the level of the folding

9:57:42 PM MsChien: MADDIE GOOD

9:57:45 PM ANISA: is when you basically pull it in a string

9:57:47 PM Rachel: primary which is a sequence chain of amino acids

9:57:53 PM ANISA: and its a sequence of amino acids

9:57:54 PM MsChien: ANISA GOOD

9:57:55 PM ANISA: and stuff

9:57:57 PM MsChien: RACHELL GOOD

9:58:13 PM Rachel: then secondary which happens when those sequences link together in hydrogen bond

9:58:18 PM ANISA: Quaternary

9:58:28 PM MsChien: RACHEL GOOD

9:58:36 PM ANISA: is when a whole bunch of proteins get together to make a big A S S protein

9:58:57 PM MsChien: ANISA YES, BUT DONT SAY THE A WORD ON A TEST

9:59:02 PM Sarah: lol

9:59:03 PM Rachel: then tertiary which happens when there is attractions between the alpha helix's and the pleated sheets

9:59:03 PM ANISA: :)

9:59:04 PM MsChien: AT LEAST NOW YOU REMEMBER

9:59:04 PM ANISA: Duh

9:59:29 PM Sarah: :-D

9:59:32 PM MsChien: SO HOW DOES GLOBULAR AND FIBROUS PROTEINS FIT INTO ALL

THIS?

9:59:36 PM Rachel: then quaternary which is a protein that consists of more than one amino acid chain

9:59:38 PM Maddie: tertiary is the 3D level. quaternary is the big A-S-S protein

9:59:50 PM Sarah: globular is spherical fibrous is chainlike

9:59:55 PM Rachel: quaternary is metabolic

9:59:57 PM Sarah: fibrous for structure

10:00:04 PM Sarah: globular for metabolic reactions

10:00:07 PM Rachel: which is globular

10:00:21 PM MsChien: WHAT LEVEL ARE GLOBULAR AND FIBROUS PROTEINS?

10:00:24 PM Sarah: enzymes are globular

10:00:31 PM Sarah: oh ummmm tertiary

10:00:36 PM MsChien: SARAH GOOD!

10:00:43 PM Sarah: kaboom =)

10:00:47 PM Rachel: nice

10:00:48 PM MsChien: ZOOOM!

10:00:53 PM Sarah: haha

10:01:01 PM ANISA: zoom zoom zoom make my heart go boom boom

10:01:04 PM ANISA: my super nova girl.

10:01:04 PM Rachel: lol

10:01:09 PM Rachel: i know that song

10:01:14 PM ANISA: yo, I do too.

10:01:21 PM MsChien: THAT IS AN ACTUAL SONG

10:01:22 PM MsChien: ?

10:01:25 PM Rachel: yea

10:01:25 PM Sarah: haha yes

10:01:27 PM Rachel: in a movie

10:01:29 PM MsChien: ***What is the role of activation energy in a chemical reaction?***

10:01:47 PM Sarah: when the energy in the reaction gets over it the reaction starts?

10:01:56 PM Rachel: it is the ideal point to which a reaction needs to hit to occur

10:02:03 PM Sarah: enzymes lower it

10:02:10 PM MsChien: RACHEL: PERFECT!!!!!!!!!!!!!!!!!!!!!!

10:02:14 PM Rachel: yes

10:02:16 PM MsChien: RACHEL IS BEAST TONIGHT

10:02:22 PM Rachel: oh yeah

10:02:27 PM ANISA: OH MY GOD

10:02:33 PM ANISA: WHOS ON FIRE?!

10:02:35 PM ANISA: YOU ON FIRE!

10:02:37 PM MsChien: RACHEL

10:02:41 PM Rachel: lol

10:02:52 PM ANISA: Rachel! It didn't register that that was you!

10:02:54 PM MsChien: ITS A BISON THING MAYBE

10:03:06 PM MsChien: ***Where are covalent bonds located in DNA?***

10:03:07 PM ANISA: AGH-OUHAGH-OUHAGH-OUH

10:03:12 PM ANISA: AGH-OUH AGH-OUH AGH-OUH
10:03:14 PM Sarah: no way!!
10:03:16 PM Rachel: between the base and sugar
10:03:18 PM ANISA: The bases and sugars
10:03:22 PM MsChien: RACHELL GOOD
10:03:24 PM ANISA: BOOM
10:03:24 PM MsChien: GOOD
10:03:26 PM Maddie: yeah, those things
10:03:30 PM ANISA: AGH-OUH AGH-OUH AGH-OUH
10:03:38 PM ANISA: RACHEL WHENEVER WE GET IT RIGHT SAY TAT
10:03:39 PM ANISA: *THAT
10:03:39 PM Sarah: and phosphate and sugar
10:03:44 PM Rachel: AGH-OUH AGH-OUH AGH-OUH
10:03:47 PM ANISA: :)
10:03:50 PM ANISA: 'catly
10:03:52 PM MsChien: OK IM OUT OF QUESTIONS!
10:03:59 PM Maddie: sweet
10:03:59 PM ANISA: :)
10:04:01 PM Rachel: k i have to go anyway
10:04:01 PM ANISA: NICE
10:04:03 PM ANISA: PUT IT ONLINE!
10:04:06 PM Maddie: goodnight everyone
10:04:08 PM ANISA: I want to print it!
10:04:09 PM MsChien: OK ILL WORK ON IT NOW
10:04:09 PM Rachel: later
10:04:11 PM Sarah: kaykums audios then
10:04:16 PM ANISA: byeee!
10:04:19 PM MsChien: HEY THATS A NEW ONE
10:04:28 PM MsChien: KAYKUMS A
10:04:33 PM Rachel: night everyone