

ONLINE REVIEW CHAT: IB BIOLOGY HL SENIORS
October 28, 2009
TOPIC: GENETICS AND BIOTECHNOLOGY

8:36:11 PM **Stepha** -----: wow could have just came into hers

8:36:25 PM **Brielle** -----: i didnt know and we already had this one

8:36:28 PM **Brielle** -----: :-)

8:36:31 PM **Stepha** -----: loser

8:36:33 PM **Brielle** -----: had*

8:36:38 PM **Brielle** -----: ur so mean stop

8:36:57 PM **Stepha** -----: okay

8:37:00 PM **Alex**: hey all

8:37:04 PM **Brielle** -----: btw i missed u

8:37:07 PM **Annie Chien**: someone invite melissa

8:37:13 PM **Brielle** -----: and our day was supposed to be a 7

8:37:22 PM **Stepha** -----: lol

8:37:32 PM **Stepha** -----: lets start studying

8:37:36 PM **Alex**: ya

8:37:49 PM **Annie Chien**: What is the role of PCR technology? How has it revolutionized DNA analysis?

8:38:13 PM **Annie Chien**: What is the role of PCR technology? How has it revolutionized DNA analysis?

8:38:14 PM **Stepha** -----: the role of PCR is to copy the DNA

8:38:26 PM **Annie Chien**: stepha good keep ging

8:38:27 PM **Annie Chien**: going

8:38:37 PM **Brielle** -----: so that more dna can be tested

8:38:47 PM **Brielle** -----: or used in experiments and such

8:39:00 PM **Stepha** -----: it has revolutionized DNA analysis so they dont have to do it by hand and the process is quicker

8:39:10 PM **Brielle** -----: good job steph

8:39:14 PM **Brielle** -----: i was gonna say that

8:39:18 PM **Stepha** -----: :-)

8:39:20 PM **Annie Chien**: stepha yeah, but i wont accept that on an exam

8:39:28 PM **Stepha** -----: :'(

8:39:28 PM **Annie Chien**: what else?

8:39:30 PM **Brielle** -----: why not?

8:39:45 PM **Annie Chien**: because with the machine or not, its still PCR

8:39:53 PM **Stepha** -----: okay

8:39:59 PM **Brielle** -----: o...kay?

8:40:26 PM **Annie Chien**: How has it revolutionized DNA analysis?

8:40:38 PM **Brielle** -----: Now we dont have to rely on trace amounts of DNA, especially when we need to do more than one test

8:40:45 PM **Annie Chien**: brielle yes

8:40:50 PM **Brielle** -----: :-)

8:41:00 PM **Annie Chien**: explain how PCR works

8:41:24 PM **Stepha** -----: PCR is when you first heat up the DNA to separate it

8:41:47 PM **Stepha** -----: and then primers attach to the template

8:42:15 PM **Stepha** -----: and nucleotides extend it out leaving sticky ends?

8:42:31 PM Annie Chien: STEPHA: GOOD KEEP GOING
8:43:19 PM Alex: ...when is this exam?
8:43:24 PM Brielle -----: mon
8:43:31 PM Stepha -----: so then that seperates again
8:43:49 PM Annie Chien: STEPHA NOT DONE YET
8:44:00 PM Annie Chien: YOU HAVENT EXPLAIN THE OTHER INGREDIENTS THAT WENT INTO IT
8:44:41 PM Stepha -----: okay i know DNA polymerase is in there but i dont know exactly how and DNA ligase "glues" the nucleotides to the template
8:44:48 PM Stepha -----: help?
8:45:00 PM Brielle -----: dna polymerase reads the strands right?
8:45:12 PM Brielle -----: or is that wrong?
8:45:13 PM Annie Chien: BRIELLE: YES, AND?
8:45:24 PM Brielle -----: ok
8:46:05 PM Annie Chien: WAITING FOR FOLKS TO PARTICIPATE
8:46:05 PM Brielle -----: well the dna polymerase reads the strand so that we know which primers/nucleotides to add to fill up the sticky ends
8:46:11 PM Brielle -----: i know!!
8:46:20 PM Brielle -----: alex and angela are doing other work too
8:46:23 PM Brielle -----: :-(
8:46:36 PM Annie Chien: PRIMERS AND NUCLEOTIDES DO TWO DIFFERENT THINGS
8:46:37 PM Brielle -----: and no one else is here!!
8:46:43 PM Stepha -----: hey i am
8:46:58 PM Brielle -----: i kno, i meant besides you and me
8:47:04 PM Brielle -----: the only 2 participating
8:47:09 PM Stepha -----: lol typical
8:47:12 PM Brielle -----: lol
8:47:20 PM Annie Chien: CONTINUE
8:47:25 PM Brielle -----: i didnt say u cuz we're like 1, i consider u my twin
8:47:27 PM Brielle -----: lol
8:47:34 PM Stepha -----: primers start the process
8:47:35 PM Annie Chien: HURRY
8:47:38 PM Annie Chien: STEPHA YES
8:47:44 PM Brielle -----: ooo
8:47:45 PM Brielle -----: ok
8:48:03 PM Stepha -----: and nucleotides attach off of where the primers start
8:48:11 PM Brielle -----: and the nuclotides fill in along the sticky ends
8:48:12 PM Brielle -----: ?
8:48:21 PM Annie Chien: CORRECT
8:48:26 PM Brielle -----: ok
8:48:32 PM Brielle -----: im gonna write that down
8:48:34 PM Annie Chien: What is the role of gel electrophoresis in DNA technology? Offer several examples, both in animal and plant applications.
8:49:02 PM Stepha -----: to seperate DNA fragments according to size
8:49:20 PM Stepha -----: comparative too
8:49:23 PM Annie Chien: STEPHA: CAREFUL, I DIDNT ASK FOR HOW GEL ELECTROPHORESIS WORK
8:50:06 PM Stepha -----: oh

8:51:06 PM Annie Chien: IM NOT TELLING ANYONE THE ANSWERS
8:51:13 PM Brielle -----: i know
8:51:15 PM Stepha -----: is it to compare different samples? I
8:51:29 PM Annie Chien: What is the role of gel electrophoresis in DNA technology? Offer several examples, both in animal and plant applications.
8:51:34 PM Annie Chien: NO LIKE ACTUAL APPLICATIONS
8:51:37 PM Annie Chien: GIVE ME AN EXAMPLE
8:51:41 PM Annie Chien: IN WHAT TYPE OF PROBLEMS
8:51:53 PM Stepha -----: like a suspect and the DNA at the crime scene?
8:51:58 PM Annie Chien: STEPHA GOOD
8:51:59 PM Annie Chien: WHAT ELSE
8:52:29 PM Stepha -----: to see if foods are genetically modified?
8:52:33 PM Annie Chien: STEPHA GOOD
8:53:49 PM Annie Chien: GIVE ME ANOTHER ONE
8:54:16 PM Stepha -----: paternity test? if they match at certain locus
8:54:22 PM Annie Chien: STEPHA GOOD
8:54:28 PM Annie Chien: How does gel electrophoresis work?
8:54:48 PM Stepha -----: by using an electric current to separate DNA fragments
8:54:59 PM Annie Chien: STEPHA WHY? HOW?
8:55:44 PM Stepha -----: DNA is more attracted to positive currents since they are negatively charged right?
8:55:52 PM Annie Chien: OTHER WAY AROUND
8:55:52 PM Stepha -----: and this is why they move
8:56:22 PM Stepha -----: ohhhhhh so they are attracted to the negative because they are positive
8:56:26 PM Annie Chien: YEP
8:56:31 PM Brielle -----: i thought dna was negatively charged
8:56:45 PM Brielle -----: because of the phosphate groups
8:56:59 PM Stepha -----: come on dont confuse me
8:57:33 PM Brielle -----: whatevz
8:58:16 PM Stepha -----: ms.chien can you just clear this up now because i dont want ot be confused
8:58:22 PM Stepha -----: to*
8:58:40 PM Brielle -----: shes not paying attention to us
8:58:46 PM Annie Chien: WAIT IM LOOKING FOR AN ANIMATION FOR YOU
8:59:58 PM Annie Chien: YIKES
8:59:58 PM Angela: dna is positively charged mschien
9:00:03 PM Angela: you told me today
9:00:03 PM Annie Chien: WAIT YOU ARE RIGHT
9:00:13 PM Annie Chien: DNA IS NEGATIVELY CHARGED, I GOT CONFUSED
9:00:17 PM Brielle -----: yea!!
9:00:19 PM Annie Chien: <http://learn.genetics.utah.edu/content/labs/gel/>
9:00:27 PM Stepha -----: YAY!!! i was right to begin with
9:00:32 PM Annie Chien: YES YOU WERE
9:00:38 PM Brielle -----: good job steph
9:00:54 PM Stepha -----: good job for bringing it up again brie
9:00:57 PM Annie Chien: <http://learn.genetics.utah.edu/content/labs/pcr/>
9:01:02 PM Brielle -----: thanx

9:01:04 PM Brielle -----: :-D

9:01:08 PM Annie Chien: HERE IS A PCR ANIMATION IF YOU WANT TO PLAY

9:01:09 PM Brielle -----: <http://biology-animations.blogspot.com/2009/09/sds-gel-electrophoresis-animation.html>

9:01:26 PM Brielle -----: look at that one ms chien

9:01:32 PM Brielle -----: and see if its good

9:01:41 PM Annie Chien: Describe basic technique used for gene transfer.

9:02:16 PM Brielle -----: like placing it in viruses?

9:02:18 PM Annie Chien: THATS VERTICAL GEL ELECTRO

9:02:19 PM Alex: thanks for the animation

9:02:25 PM Annie Chien: ITS NOT WHAT WE ARE DOING

9:02:28 PM Brielle -----: oo

9:02:35 PM Brielle -----: i was just asking?

9:02:36 PM Annie Chien: IT SEPARATES PROTEINS

9:02:37 PM Brielle -----: lol

9:02:39 PM Brielle -----: oooo

9:02:41 PM Brielle -----: ok

9:02:52 PM Alex: WHY ARE YOU PERMANTLY ON CAPS LOCK?

9:02:56 PM Annie Chien: THE GEL WE DO SEPARATES DNA

9:03:02 PM Brielle -----: ok

9:03:10 PM Annie Chien: SO THAT YOU CAN DISTINCT ME AND YOU GUYS

9:03:15 PM Annie Chien: SO YOU CAN SEE THE ANSWERS AND QUESTIONS

9:03:25 PM Alex: oh ok ;-)

9:03:43 PM Annie Chien: Describe basic technique used for gene transfer.

9:03:53 PM Brielle -----:
http://croptechnology.unl.edu/animationOut.cgi?anim_name=Gel_electrophoresis.swf

9:03:56 PM Brielle -----: i think thats dna

9:04:22 PM Annie Chien: OK THAT SEEMS OK

9:04:23 PM Brielle -----: and is there one specific basic technique?

9:04:24 PM Stepha -----: is this when they replace the gene like the plasmid thing

9:04:41 PM Brielle -----: or is it putting the gene in a virus?

9:04:49 PM Brielle -----: cuz i'm not sure which one

9:05:50 PM Annie Chien: WELL, ITS BOTH

9:05:56 PM Brielle -----: ok

9:06:06 PM Brielle -----: so do u wanna explain urs first steph?

9:06:11 PM Annie Chien: LETS SAY IF I WANTED TO CREATE BT CORN, HOW WOULD I DO THAT

9:08:26 PM Brielle -----: well you can replace the dna of the vector (virus or bacteria) with the dna of bt corn and then plant the virus in the dna of the plant and the virus will distribute the

9:08:46 PM Annie Chien: BRIELLE: YOU DONT QUITE REPLACE IT

9:09:00 PM Brielle -----: u just take the virus's dna out

9:09:01 PM Brielle -----: ?

9:09:15 PM Brielle -----: and then put the dna you want in?

9:09:17 PM Annie Chien: WELL IF YOU ARE USING VIRUS AS A VECTOR

9:09:24 PM Annie Chien: WHAT IF YOU CHOOSE TO USE A BACTERIA

9:10:07 PM Brielle -----: i dont get the difference?

9:10:14 PM Stepha -----: you insert the bacteria in the plant cell and as cells replicate they pass it on?

9:10:18 PM Annie Chien: A VIRUS IS NOT THE SAME AS A BACTERIA

9:10:23 PM Brielle -----: no

9:10:26 PM Brielle -----: i know that

9:10:37 PM Annie Chien: IF YOU DO THE SAME WITH A BACTERIA, IT WOULD JUST DIE

9:10:39 PM Brielle -----: but i thought u still put the dna in the bacteria

9:10:42 PM Brielle -----: ooo

9:10:45 PM Brielle -----: really?

9:11:03 PM Brielle -----: so how would you do it if you used a bacteria as a vector

9:11:05 PM Brielle -----: ?

9:11:18 PM Brielle -----: how would the technique be different cuz idk

9:11:25 PM Annie Chien: WE DID THIS 2X

9:11:33 PM Brielle -----: well; idr

9:11:37 PM Stepha -----: isnt this the one with the ti plasmid

9:11:39 PM Annie Chien: HINT: BACTERIA HAS A PLASMID

9:11:41 PM Annie Chien: YES

9:11:51 PM Brielle -----: oo

9:12:00 PM Brielle -----: well i dont remember that one

9:12:07 PM Stepha -----: so they take out the ti plasmid

9:12:08 PM Brielle -----: so steph can explain and ill write it down

9:12:19 PM Stepha -----: and cut it with a restriction enzyme

9:12:24 PM Annie Chien: STEPHA YEP

9:13:00 PM Stepha -----: then replace that gene (in the example the one that causes tumors) with a gene of interest

9:13:18 PM Annie Chien: OK

9:13:21 PM Brielle -----: ohh

9:13:22 PM Brielle -----: ok

9:13:28 PM Brielle -----: yo recuerdo ahora

9:13:37 PM Stepha -----: and then thats the recombinant plasmid

9:13:47 PM Annie Chien: YES

9:14:19 PM Stepha -----: they culture it or do they put in in plant cells>

9:14:36 PM Annie Chien: OK GOOD

9:14:59 PM Annie Chien: ALEX, I JUST SEND YOU SOMETHING

9:15:19 PM Stepha -----: mschien i just asked a question

9:15:29 PM Annie Chien: I DONT SEE A QUESTION MARK!

9:15:38 PM Annie Chien: STEPHA THEY DO BOTH

9:15:48 PM Stepha -----: which first

9:15:50 PM Stepha -----: ?

9:15:54 PM Brielle -----: culture it

9:15:54 PM Annie Chien: CULTURE, AND THEN PUT IT WITH REGULAR PLANT CELLS TO LET THE BACTERIA INCORPORATE THE GENE

9:16:11 PM Brielle -----: ok

9:16:31 PM Stepha -----: okay

9:16:34 PM Annie Chien: <http://www.dnalc.org/resources/animations/gelelectrophoresis.html>

9:16:43 PM Brielle -----: u beasted on me ms chien

9:16:46 PM Annie Chien: Describe two examples of the current uses of genetically modified crops or animals.

9:17:39 PM Brielle -----: crops can be grown to produce desired traits like bt corn

9:17:56 PM Brielle -----: bt corn is modified so that it is resistant to pesticides

9:17:56 PM Annie Chien: DETAILS DETAILS
9:18:19 PM Alex: thank you mschein for the pp
9:18:36 PM Brielle -----: the nutritional value can be modified to to make the foods healthier for human consumption
9:18:54 PM Annie Chien: OK GOOD
9:19:01 PM Annie Chien: BUT BRING UP THE SPECIFIC EXAMPLE THAT MATCHES WITH
9:19:33 PM Brielle -----: ummm
9:19:40 PM Brielle -----: idk an example
9:19:42 PM Brielle -----: h.o.
9:19:47 PM Brielle -----: i'm gonna get my packet
9:20:15 PM Stepha -----: are we still on BT corn?
9:20:24 PM Alex: yes im sorry could someone repeat the q
9:20:34 PM Annie Chien: I JUST WANTED DETAILS TO THE QUESTION
9:20:43 PM Annie Chien: Describe two examples of the current uses of genetically modified crops or animals.
9:21:02 PM Stepha -----: cloning animals?
9:21:15 PM Brielle -----: ok so for nutrition, rice
9:21:23 PM Annie Chien: STEPHA: KEEP IT TO THE EXAMPLES WE USED IN CLASS
9:21:27 PM Annie Chien: BRIELLE WHAT?
9:21:29 PM Annie Chien: SENTENCES
9:21:31 PM Brielle -----: rice doesnt have vitamin a
9:21:49 PM Brielle -----: and lack of vit a can lead to blindness
9:22:06 PM Annie Chien: OK
9:22:11 PM Annie Chien: KEEP GOING
9:22:16 PM Brielle -----: so we can genetically modify the crop so that it can provide it
9:22:29 PM Annie Chien: WHAT IS THE SPECIFIC RICE CALLED?
9:22:34 PM Brielle -----: idk
9:22:37 PM Brielle -----: golden rice?
9:22:39 PM Annie Chien: YES
9:22:42 PM Stepha -----: lol
9:22:44 PM Annie Chien: OK
9:22:45 PM Brielle -----: yay!!!
9:22:45 PM Alex: more output of crops because the insects die e.g. corn borer
9:22:54 PM Brielle -----: shut up alixa
9:23:00 PM Alex: :-(
9:23:02 PM Brielle -----: u cant just jump in in the middle
9:23:02 PM Annie Chien: ALEX WHICH EXAMPLE AR YOU REFERRING TO
9:23:04 PM Brielle -----: lol
9:23:05 PM Brielle -----: jk
9:23:09 PM Annie Chien: GOLDEN RICE?
9:23:14 PM Brielle -----: :-P
9:23:14 PM Alex: im just throwing something out there
9:23:21 PM Alex: Bt corn
9:23:24 PM Annie Chien: OK GOOD
9:23:28 PM Annie Chien: KEEP GOING
9:23:36 PM Alex: keep going with what?
9:23:51 PM Brielle -----: ok so steph finish what u were going to say about cloning cuz you got cut off so srry

9:23:52 PM Annie Chien: YOU WERE ON AN EXAMPLE ELABORATE ON IT

9:24:17 PM Annie Chien: WAIT, KEEP CLONING ON THE SIDE

9:24:21 PM Annie Chien: WE WILL GET TO IT IN A SEC

9:24:22 PM Stepha -----: yeah but she said stick to the examples from class brie

9:24:33 PM Brielle -----: awww

9:24:37 PM Brielle -----: boo!!

9:24:38 PM Brielle -----: lol

9:24:46 PM Annie Chien: BT CORN

9:24:52 PM Annie Chien: ELABORATE ON EXAMPLE

9:25:09 PM Alex: ok so don't the crystalline thingys correspond to the gut of corn borers therefore making them die

9:25:18 PM Annie Chien: YES

9:25:32 PM Annie Chien: OK SO

9:25:34 PM Stepha -----: transgenic

9:25:41 PM Annie Chien: HOW DOES MAKING TRANSGENIC BT CORN HELP

9:26:15 PM Alex: there is more corn to go around, PRICES WILL LOWER, THE GLOBAL FOOD CRISI SOLVED

9:26:17 PM Stepha -----: more efficient

9:26:23 PM Alex: something like that

9:26:46 PM Annie Chien: EFFICIENT? HOW?

9:26:48 PM Alex: more efficient for our time.. right now... its the best of what we have

9:26:54 PM Stepha -----: you dont need to spray them

9:26:59 PM Annie Chien: BECAUSE?

9:27:00 PM Alex: more output, more reliable to grow

9:27:08 PM Alex: its already in the corn

9:27:15 PM Stepha -----: they can already fight off the insect

9:27:16 PM Annie Chien: THE CORN PRODUCES BT

9:27:24 PM Stepha -----: its in their genes

9:27:25 PM Annie Chien: Discuss the potential benefits and possible harmful effects of one example of genetic modification.

9:28:08 PM Alex: bt corn: potential benefits are what we just discussed above

9:28:14 PM Annie Chien: OK

9:28:24 PM Stepha -----: For BT corn insects can evolve and become immune to the gene and SUPERINSECTS will take over

9:28:34 PM Brielle -----: bt corn - it can resist pest so the output is greater

9:28:40 PM Annie Chien: IMMUNE TO THE BT, NOT THE GENE

9:28:52 PM Alex: harmful effects would be the 'mutation' of insect species and the killing of non-target species

9:29:00 PM Stepha -----: it still partially toxic

9:29:00 PM Annie Chien: BRIELLE, WHAT???????

9:29:07 PM Annie Chien: ALEX: GOOD

9:29:50 PM Brielle -----: ok so insecticides keep insects from destroying crops but doesnt harm the drop itself

9:29:56 PM Brielle -----: which is a +

9:29:56 PM Annie Chien: OTHER BENEFITS OF GOLDEN IRCE

9:29:57 PM Annie Chien: RICE

9:30:10 PM Stepha -----: improve eyesight

9:30:10 PM Annie Chien: BRIELLE: GOOD

9:30:15 PM Alex: gives vitamins to those people that could otherwise not come by it
9:30:18 PM Brielle -----: it can be modified to produce vit a and prevent blindness
9:30:19 PM Alex: yeah
9:30:31 PM Annie Chien: OK SO BIG DEAL, BUT WHY RICE?
9:30:38 PM Annie Chien: WHY NOT COOKIES, OR STEAK
9:30:41 PM Brielle -----: because rice is international
9:30:46 PM Stepha -----: it is common to their diet
9:30:51 PM Annie Chien: STEPHA BETTER
9:31:01 PM Alex: because it is crucial to their diets
9:31:11 PM Brielle -----: crucial to whose diets?
9:31:17 PM Brielle -----: humans around the world?
9:31:21 PM Stepha -----: indians and africans
9:31:27 PM Annie Chien: ALEX: YES AND NO, THEY CAN ALWAYS CHOOSE ANOTHER SOURCE OF CARB, BUT RICE IS JUST COMMON IN THEIR DIET
9:31:28 PM Alex: yeah
9:31:36 PM Alex: thats what i meant
9:31:48 PM Brielle -----: why just africans and indians though?
9:32:23 PM Stepha -----: it can be for everyone but since rice is common to their diets they use golden rice instead
9:32:29 PM Alex: yeah
9:32:32 PM Brielle -----: ooo'
9:32:33 PM Brielle -----: ok
9:32:42 PM Annie Chien: I THINK GOLDEN RICE WAS ORIGINALLY MEANT FOR 3RD WORLD NATIONS IN SOUTHEAST ASIA
9:32:50 PM Brielle -----: cuz i was thinking on a broader, worldwide sense
9:32:52 PM Annie Chien: STEPHA :-)
9:33:00 PM Stepha -----: :-)
9:33:02 PM Brielle -----: yea i was thinking asia too
9:33:07 PM Brielle -----: thats why i asked
9:33:22 PM Annie Chien: PLUS I THINK RICE I EASIER TO CULTIVATE
9:33:26 PM Brielle -----: thanx for clearing it up steph
9:33:35 PM Stepha -----: always happy to help
9:33:40 PM Brielle -----: :-)
9:33:57 PM Annie Chien: INDIA IS IN SOUTHEAST ADIA
9:33:59 PM Annie Chien: ASIA
9:34:05 PM Annie Chien: Describe a clone.
9:34:32 PM Stepha -----: a copy
9:34:46 PM Stepha -----: an exact copy of the DNA
9:34:48 PM Annie Chien: DETAILS! DETAILS!
9:34:54 PM Stepha -----: from the original
9:34:54 PM Annie Chien: MORE DETAILS!
9:35:04 PM Stepha -----: without introns
9:35:07 PM Annie Chien: AN ORGANISM WITH
9:35:17 PM Brielle -----: the same dna as the original
9:35:25 PM Brielle -----: minus the junk dna
9:35:27 PM Annie Chien: JUST WITHOUT
9:35:32 PM Annie Chien: OK GOOF
9:35:32 PM Brielle -----: junk dna

9:35:34 PM Annie Chien: GOOD

9:35:34 PM Brielle -----: lol

9:35:40 PM Annie Chien: WELL YOU ARE A GOOF

9:35:48 PM Annie Chien:

Describe two examples of using clone technology to benefit animals and plants

9:36:26 PM Brielle -----: you know ms chien?

9:36:28 PM Alex: cloning organs

9:36:34 PM Annie Chien: ALEX WHY, AND HOW

9:36:40 PM Brielle -----: some of these questions dont help me on the test

9:36:41 PM Brielle -----: lol

9:36:59 PM Alex: they take stem cells and ggorw oh lets say a heart just in case you need a transplant or somkething

9:37:07 PM Alex: it can be used as a precaution

9:37:07 PM Annie Chien: OK

9:37:08 PM Stepha -----: brb

9:37:11 PM Alex: k

9:37:30 PM Annie Chien: BRIELLE: FINE FINE, YOU DONT HAVE TO LISTEN

9:37:36 PM Annie Chien: ALEX: AS A PRECAUTION?

9:37:37 PM Brielle -----: i am listening

9:37:42 PM Alex: umm i can't think of any other reasons except just to experiment

9:37:46 PM Brielle -----: i was just saying

9:37:56 PM Annie Chien: YES, AND THATS WHY YOU HAD AN 85

9:37:58 PM Alex: in case they get in a car accident or something'

9:38:01 PM Annie Chien: ON THE LAST HARD TEST

9:38:04 PM Brielle -----: no

9:38:09 PM Brielle -----: and it was an 86

9:38:11 PM Annie Chien: NO, QUIET

9:38:17 PM Annie Chien: SEE THE HAND

9:38:21 PM Annie Chien: *****

9:38:26 PM Brielle -----: there is no hand

9:38:33 PM Brielle -----: but anyway go on alex

9:38:37 PM Annie Chien: GOOD IM GLAD YOU ARE NOT READING

9:38:48 PM Annie Chien: OK

9:39:04 PM Annie Chien: Outline a technique for cloning using differentiated animal cells.

9:39:13 PM Alex: hint?

9:39:19 PM Annie Chien: HINT: PP

9:39:44 PM Alex: OOOH

9:40:22 PM Alex: ok so first zona pellucida is removed with an enzyme and the two cells are seperated

9:41:00 PM Alex: once they are seperated an artificial zona pellucida is put on the two cells

9:41:27 PM Annie Chien: OK WHY TAKE THEM OFF IN THE FIRST PALCE

9:41:30 PM Annie Chien: PLACE

9:41:46 PM Alex: then the cells multiply and they place the embryos into a female uterus

9:41:52 PM Melissa: so they can develop seperately

9:41:56 PM Alex: yeah

9:42:28 PM Brielle -----: the zp has to be taken off in order to fertilize the egg

9:42:42 PM Alex: YES

9:43:00 PM Annie Chien: MELISSA YES
9:43:06 PM Stepha -----: im back
9:43:08 PM Brielle -----: because sperm usually fights its way through the zp in order to fertilize the egg
9:43:14 PM Annie Chien: BRIELLE, OK BUT ITS MAINLY USED FOR DEVELOPMENT
9:43:22 PM Brielle -----: welcome back meli
9:43:24 PM Annie Chien: Outline a technique for cloning using undifferentiated animal cells.
9:43:51 PM Alex: nuclear transfer
9:43:52 PM Alex: ?
9:43:53 PM Melissa: thanks brielle lol
9:43:56 PM Annie Chien: ALEX YES
9:44:02 PM Annie Chien: DETAILS DETAILS
9:44:03 PM Annie Chien: DETAILS
9:44:28 PM Alex: i can't the rest of the pp isn't working!
9:44:40 PM Melissa: the egg cells taken from one sheep, its fuzed with electricity
9:44:44 PM Stepha -----: okay the sheep thing
9:44:59 PM Annie Chien: <http://static.howstuffworks.com/gif/cloning-sheep.gif>
9:45:01 PM Melissa: n then it starts developing n its put into another sheep
9:45:24 PM Brielle -----: after its shocked with an electric pulse to fertilize
9:45:26 PM Annie Chien: WHAT DO THEY DO TO THE DONOR EGG BEFORE ALL THIS HAPPENS? AND WHY
9:45:54 PM Stepha -----: take everthing out leaving the shell
9:45:55 PM Alex: remove the nucleus
9:45:55 PM Brielle -----: they shock it with an electric pulse in order to jumpstart the fertilization
9:45:58 PM Brielle -----: oo
9:45:59 PM Brielle -----: yea
9:46:00 PM Alex: nvm
9:46:02 PM Brielle -----: that first
9:46:03 PM Annie Chien: BRIELLE BEFORE
9:46:03 PM Melissa: n they remove the nucleus
9:46:05 PM Alex: or yes?
9:46:07 PM Annie Chien: ALEX: YES
9:46:14 PM Annie Chien: WHY?????????
9:46:19 PM Alex: y what?
9:46:24 PM Melissa: but im not sure y they remove it
9:46:27 PM Annie Chien: WOULD TEHY REMOVE THE NUCLEUS OF THE DONOR EGG?
9:46:44 PM Brielle -----: because the donor's dna is in there?
9:46:48 PM Alex: to make room for the other nucleus
9:46:49 PM Brielle -----: wait nvm
9:46:51 PM Stepha -----: in order to put in the genes from the "clone"
9:46:54 PM Annie Chien: OK
9:46:55 PM Annie Chien: GOOD
9:46:57 PM Alex: yeah or that
9:47:06 PM Annie Chien: WHAT IS THE ROLE OF THE DONOR EGG ANYWAYS
9:47:29 PM Annie Chien: OR THE DONOR
9:47:34 PM Alex: to provide protection for the other ...thing
9:47:43 PM Alex: egg

9:47:48 PM Annie Chien: I DONT SPEAK ALEX-NESE!
9:47:52 PM Stepha -----: provide nutrients
9:47:54 PM Alex: AHH
9:48:15 PM Stepha -----: allow it to grow in the womb (house it)
9:48:19 PM Alex: nutrients and protection
9:48:27 PM Annie Chien: STEPHA: YES THATS THE PURPSE OF THE DONOR
9:48:30 PM Annie Chien: ALEX: YES
9:48:31 PM Alex: allow it to be placed back in femal
9:48:33 PM Melissa: its kind of like an apartment for the egg
9:48:38 PM Alex: yes indeed
9:48:55 PM Annie Chien: I REALLY DONT SPEAK ALEX-NESE
9:49:06 PM Annie Chien: MELISSA YES
9:49:07 PM Annie Chien: GOOD
9:49:20 PM Annie Chien: HMM MELISSA IS GOOD AT THIS TECHNOLOGY THING
9:49:35 PM Annie Chien: Discuss the benefits and drawbacks of using differentiated vs. undifferentiated cells in medical applications.
9:49:41 PM Brielle -----: she better be this good the next time we play a game
9:49:45 PM Annie Chien: MELISSA YOU SHOULD THINK ABOUT BEING A BIOTECHICIAN
9:49:53 PM Annie Chien: YEAH YEAH YEAH
9:49:59 PM Brielle -----: we gotta get rid of this granny smith apple rep
9:50:05 PM Brielle -----: :-D
9:50:26 PM Annie Chien: Discuss the benefits and drawbacks of using differentiated vs. undifferentiated cells in medical applications.
9:50:27 PM Annie Chien: Discuss the benefits and drawbacks of using differentiated vs. undifferentiated cells in medical applications.
9:50:27 PM Annie Chien: Discuss the benefits and drawbacks of using differentiated vs. undifferentiated cells in medical applications.
9:51:06 PM Melissa: biotechnician??
9:51:10 PM Alex: no bias, however you couldn't be aware of any condition present in the parent
9:51:26 PM Annie Chien: THEY ARE THE PEOPLE WHO PERFORMS THE PCR, GEL ELEPHORESIS, AND INTERPRET THE RESULTS
9:51:35 PM Annie Chien: LIKE THE CSI GUYS, BUT THEY WORK JUST IN THE LABS
9:51:40 PM Melissa: ohh
9:51:44 PM Melissa: i wanted to work in the lab
9:51:53 PM Annie Chien: ALEX, WHAT
9:51:55 PM Annie Chien: Discuss the benefits and drawbacks of using differentiated vs. undifferentiated cells in medical applications.
9:52:08 PM Annie Chien: CAN YOU SAY IN COMPLETE SENTENCES WHICH ONE ARE YOU TALKING ABOUT
9:52:16 PM Annie Chien: ALBANY SCHOOL OF PHARMACY HAS A PROGRAM
9:52:28 PM Brielle -----: undifferentiated are good because they can be used to make any type of cell
9:52:34 PM Annie Chien: BRIELLE GOOD
9:52:40 PM Brielle -----: like liver cells if someone needs a liver
9:53:05 PM Annie Chien: THIS TEST HAS NO ESSAY QUESTION
9:53:09 PM Annie Chien: LOTS OF SHORT ANSWERS
9:53:10 PM Annie Chien: LOTS
9:53:28 PM Brielle -----: yay!!!

9:53:40 PM Brielle -----: what the max amount of marks for one question
9:53:42 PM Annie Chien: Discuss the benefits and drawbacks of using differentiated vs. undifferentiated cells in medical applications. ??????
9:53:45 PM Brielle -----: 5 marks?
9:53:46 PM Annie Chien: 5 - 7
9:53:51 PM Brielle -----: ok
9:54:09 PM Annie Chien: Discuss the benefits and drawbacks of using differentiated vs. undifferentiated cells in medical applications.
9:54:17 PM Annie Chien: NOT DONE WITH THAHT QUESTION YET!
9:54:25 PM Stepha -----: differentiated is good because it is specific to that type of cell
9:54:34 PM Stepha -----: but also cant be changed
9:54:41 PM Stepha -----: or used for something else
9:54:46 PM Annie Chien: STEPHA GOOD
9:54:52 PM Annie Chien: ANY ETHICAL ISSUES FOR BOTH TYPES
9:55:11 PM Stepha -----: undifferentiated can be used for almost anything but in using stem cells
9:55:20 PM Annie Chien:
9:55:26 PM Annie Chien: STEPHA GOOD
9:55:31 PM Annie Chien: DID YOU GUYS SEE THAT KITTY PIC
9:55:37 PM Stepha -----: the question arises in the killing of an embryo
9:55:46 PM Annie Chien: <http://icanhascheezburger.files.wordpress.com/2009/10/funny-pictures-your-catalog-is-in-3d.jpg>
9:55:57 PM Annie Chien: WHICH ONE IS THE EMBRYO?
9:56:06 PM Brielle -----: because undifferentiated cells lack specific functions
9:56:11 PM Stepha -----: yeah
9:56:32 PM Brielle -----: wow ms chien
9:56:33 PM Annie Chien: WHICH ONE IS THE EMBRYO?
9:56:38 PM Brielle -----: a katalog
9:56:39 PM Brielle -----: ?
9:56:44 PM Brielle -----: the differentiated
9:56:47 PM Brielle -----: right?
9:56:51 PM Annie Chien: NO
9:57:21 PM Annie Chien: ????
9:57:23 PM Annie Chien: ??????????????????????????????????????
9:57:29 PM Stepha -----: you can make it into whatever but is it unethical because they are not fully developed
9:57:35 PM Annie Chien: STEPHA YES
9:57:36 PM Annie Chien: GOOD
9:57:51 PM Annie Chien: WHICH ONE IS THE EMBRYO - THAT IS THE ETHICAL QUESTION
9:57:58 PM Brielle -----: oooo
9:58:00 PM Annie Chien: ONE MORE QUESTION
9:58:08 PM Annie Chien: Describe how scientists are revolutionizing organ replacement using cloning technology (you must describe the process).
9:58:20 PM Brielle -----: you have to tell me why i;m wrong ms chien
9:58:27 PM Brielle -----: you cant just say no
9:58:37 PM Brielle -----: because i'll never no why i'm wrong
9:58:51 PM Annie Chien: YES AND THATS WHY YOU HAD AN 86 ON YOUR LAST HARD EXAM
9:59:02 PM Annie Chien: YOU OVERACHIEVERS MAKE ME SICK

9:59:08 PM Brielle -----: lol

9:59:15 PM Annie Chien: YOU ARE NOT WRONG, BUT NOT CORRECT EITHER

9:59:42 PM Annie Chien: THE STAGE OF WHETHER A BUNCH OF STEM CELLS ACTUALLY BECOMES AN EMBRYO IS THE QUESTION

9:59:50 PM Brielle -----: so its the right answer to the wrong question?

10:00:07 PM Annie Chien: NO

10:00:18 PM Brielle -----: ok whatevz

10:00:20 PM Annie Chien: THERE IS NO RIGHT ANSWER TO THIS QUESTION

10:00:30 PM Annie Chien: BUT YOU NEED TO EXPLAIN THE CONTROVERSAY

10:00:33 PM Annie Chien: Describe how scientists are revolutionizing organ replacement using cloning technology (you must describe the process).

10:00:34 PM Brielle -----: oo

10:00:35 PM Brielle -----: ok

10:01:06 PM Annie Chien: Describe how scientists are revolutionizing organ replacement using cloning technology (you must describe the process).

10:01:07 PM Annie Chien: Describe how scientists are revolutionizing organ replacement using cloning technology (you must describe the process).

10:02:07 PM Stepha -----: they are revolutionizing it by creating their own organs

10:02:15 PM Stepha -----: so it is a perfect match

10:02:25 PM Stepha -----: instead of waiting for a donor

10:02:35 PM Annie Chien: details details

10:03:00 PM Brielle -----: so undifferentiated cells are modified to be a certain organ that is intact for people that need them

10:03:14 PM Annie Chien: intact????

10:03:22 PM Brielle -----: like they work

10:03:28 PM Annie Chien: for the individual

10:03:31 PM Brielle -----: yea

10:03:33 PM Annie Chien: ok

10:03:35 PM Annie Chien: good

10:03:42 PM Brielle -----: so they dont need to wait and hope for a donor

10:03:49 PM Brielle -----: because some people are on waiting lists

10:04:02 PM Annie Chien: DO SO YOU THINK THEY SHOULD USE UNDIFFERENTIATED CELLS OR DIFFERENTIATED CELLS FOR THAT?

10:04:04 PM Brielle -----: and they die because another person is a better candidate

10:04:51 PM Annie Chien: DO SO YOU THINK THEY SHOULD USE UNDIFFERENTIATED CELLS OR DIFFERENTIATED CELLS FOR THAT?

10:05:12 PM Stepha -----: undiffentiated

10:05:15 PM Brielle -----: i was thinking undifferentiated because it gives scientists more flexibility to create certain organs and modify them

10:05:16 PM Annie Chien: WHY

10:05:24 PM Annie Chien: GOOD BRIELLE

10:05:25 PM Brielle -----: more easily so that they specific

10:05:29 PM Brielle -----: to the person

10:05:36 PM Annie Chien: BRIELLE DID YOU ASK YOUR MOTHER ABOUT THE TRIP QUESTION

10:05:36 PM Brielle -----: yay!!

10:05:39 PM Brielle -----: oo

10:05:45 PM Annie Chien: WELL ASK HER AND TELL ME TOMORROW

10:05:46 PM Brielle -----: no i wasnt home and she's sleeping

10:05:48 PM Brielle -----: ok
10:05:53 PM Brielle -----: i will
10:06:01 PM Annie Chien: OK ITS 10
10:06:05 PM Annie Chien: I NEED TO SPEND TIME WITH MY CATS
10:06:13 PM Brielle -----: 10:06
10:06:14 PM Brielle -----: lol
10:06:22 PM Brielle -----: find weird cat lady
10:06:25 PM Stepha -----: lol not her husband
10:06:26 PM Brielle -----: fine*
10:06:29 PM Annie Chien: NO
10:06:29 PM Brielle -----: i know
10:06:32 PM Annie Chien: MY CATS DONT COMPLAIN
10:06:33 PM Brielle -----: cuz he's mean
10:06:37 PM Stepha -----: bye mschien
10:06:39 PM Annie Chien: BYEBYE
10:06:40 PM Stepha -----: chat tom
10:06:46 PM Brielle -----: yep