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Trivia Questions
For Presentation
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The company's name, Celera, comes from the word celerity. What does this root work mean?
A. Rabbit food relative
B. Rapidity of action
C. An archaic form of celebrate
When it comes to sequencing the human genome, rapidity of action is Celera's primary goal.

Biography of Craig Venter

Dr. Venter served helped the military fight in the Vietnam, but what was he doing in his pre-Vietnam days?
A. DNA Research
B. Surfing the waves
C. Pursuing a lackadaisical interest in the arts.
Dr. Venter was taking odd jobs up and down the coast of northern California to earn money so he could spend his free time surfing.

However, after his service in the war, his mindset changed rapidly. In fact he decided to go to college. He chose to go to
A. UC Berkley
B. Stanford
C. UC San Diego
He pursued and earned a BA and Ph.D. in Biochemistry in a mere 6 years.

In 1984, he started working for the NIH. Where he pushed to begin a serious effort to sequence the Human Genome. As soon as he heard of an automated, however slow, sequencing machine, he asked the government for his own machine and laboratory. Unfortunately, he didn't get one. Soon after 1990, the official start of the government's effort to sequence the genome, Venter wanted to pursue his own project. What did he want to do?
A. Use shotgun sequencing
B. Put more money in the program
C. Want his own share of the money
He asked for $10million dollars to sequence most of the protein producing genes and promised the task would be completed in 4-5 years. However the government denied his request because it was not willing to give one researcher biased funding.

However, a venture capitalist named Wallace Steinberg believed Venter. He asked Venter to leave the NIH and direct a non-profit organization to sequence the gene. The name of the non-profit institution is:
A. Celera
B. The Institute of Genomic Research (TIGR)
C. Human Genome Service (HGS)
TIGR is non-profit, however any of its discoveries are automatically given to HGS

So the two men started working on the project. It was at TIGR that Venter first started using shotgun sequencing as the primary method. Also because shotgun sequencing requires the re-making of the DNA strand, they had developed a computer program called Assembler to perform the task. So they decided to test the program and the technique on Haemophilus Influenzae Bacterium, a 2 million base pair organism. How does this bacteria affect humans?
A. Ear infections
B. Respiratory infections
C. Both A and B
As they started, they asked for a grant for the project. Several months into sequencing, the government processed the request decided to deny Venter, again, of a financial aid. They didn't believe Venter was going to be able to do what he claimed. A few weeks after the denial, Venter finished sequencing the entire genome.

How many other organisms has Venter sequenced while at TIGR?
A. 0
B. 5
C. 6
The six organisms are a deep sea, hot pocket microbe, helicobacter pylori, borrelia burgdorfer (Lyme disease) and two other organisms. Not to mention 35K protein producing genes

<u>Celera is born</u>

May 9th, 1998 the sponsor, Perkin-Elmer, and Venter signed letter of intent. And boom, we have Celera. Very recently, within the last few weeks, Celera's lab was fully completed. The lab uses chillers that push 1600 cubic meters of cool air per minute to cool the 257 sequencing machines. What do you think the combined sequencing capacity of these machines is?
A. 100 million base pairs per minute
B. More than more than last year's government's total per day
C. The entire human genome in 3 years
All of these figures are accurate according to Venter's expectation of his facility at full production. Each machine can run for 2 days unmanned before few hour hiatus during which ha skilled technician replaces chemicals in the machine. And instead of archaic gel trays, the machines use 104 capillary tubes to carry out the electrophoresis.

Competitors

The only reason the government is a competitor is because its head, Dr. Collins decided to sacrifice accuracy to fight against the private sector. The government now promises to have rough working draft by:
A. 2000
B. 2001
C. 2002
And will have the "gold" version by:
A. 2001
B. 2002
C. 2003
Venter's plan of course is still a little more ambitious. He plans to have an accurate sequence by 2001.

Here in Palo Alto, InCyte has also started an attempt to compete with Celera. How much money has InCyte decided to spend on their efforts over the next two years?
A. $200 mill
B. $300 mill
C. $400 mill
InCyte hopes to find the SNP's responsible for diseases.

The NIH and its British counterpart held a conference in Bermuda where they decided to release sequence data immediately and to never patent genes on a wholesale basis. However InCyte and Celera do not plan to abide by the precedent set at the conference due to their financial motives

Findings

How often does InCyte post its findings, Celera?

A. Never
B. Monthly
C. Quarterly
InCyte = A; Celera = B

How many genes does InCyte plan to patent, Celera

A. Every one they find
B. Several hundred
C. None
InCyte = A; Celera = B

Helpers

Celera is using the aid of two computer companies two help manage their data. One is Compaq, who is using the 64-bit Alpha systems to handle the vast amounts of data. The other company called Paracel that provides a computer known as GeneMatcher. This computer is responsible for performing:

A. Smith-Waterman tests
B. Hidden Markov Models
C. Other tests

The computer performs all of these tests. The custom made computer uses 6000 custom-made chips specific for the task.

Customers

Amgen is already contracting with Celera. The 5-year deal is a model for contracts Celera hopes to sign in the future with companies such as Amgen. Which one of these is not part of the deal?

A. Amgen will receive specialized research services from Celera, including more gene discovery
B. Broad access to databases
C. Royalty free dealing with Celera.

Celera will retain the right to collect royalties on if there are commercial sales.

In conclusion, Celera seems to be the emerging Microsoft of genetics. With its super-sequencing power and promises of accuracy and expediency, I feel that the company will win the race. It is already set out provisions to secure its place in the post-genomic era as a database/sequencing giant and has already secured customers and jump on its competition.