

# ANSWERS

# DNAi Timeline: a scavenger hunt

- 1. It took him eight years and more than 10,000 pea plants to discover the laws of inheritance. Johann Gregor Mendel
- 2. Even though he added an extra strand to the structure of DNA, he ultimately won two Nobel Prizes: the Nobel Prize in Chemistry and the Nobel Peace Prize.

#### Linus Pauling

3. This scientist won two Nobel Prizes in Chemistry: one for his work on the structure of protein and another for work on the determination of base sequences in nucleic acids. Quite a sequence of events!

#### Frederick Sanger

4. These scientists used a common kitchen appliance to help show that phage DNA carries instructions to make new phage particles. Thinking of making a milkshake?

## Martha Chase and Alfred Hershey

5. Next time you're munching away at the movies, think of this Nobel-Prize winning scientist who figured out the process of transposition in corn chromosomes.

#### Barbara McClintock

6. When did Drs. Watson, Crick and Wilkins receive the Nobel Prize in Physiology or Medicine for solving the structure of DNA?

## 1962

7. This scientist found that some viruses have an RNA-dependent DNA polymerase that was later named "reverse transcriptase." He was one of three who shared in the 1975 Nobel Prize in Physiology or Medicine.

#### David Baltimore

- Even though he had worked on a potato farm, Steve Fodor's work led to the development of this kind of chip (you can't eat it!). GeneChip®
- 9. J. Craig Venter's company, Celera Genomics, worked on this very important project.

## The Human Genome Project

10. Matthew Meselson and Frank Stahl invented this new technique in their quest to prove that DNA replication is semi-conservative.

Density gradient centrifugation



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11. In which year was the first test-tube baby born?

1978

12. I first isolated DNA using pus collected from bandages at a local hospital. Since white blood cells are a major component of pus, they were my source of DNA. Yuck!

Friedrich Miescher

13. The "fly room" at Columbia University was established through my efforts. Imagine working in a room filled with bottle after bottle of fruit flies!

#### Thomas Hunt Morgan

14. We worked together to demonstrate how genes work during development to change a single egg cell into a complex organism. Follow our experiment and find out what the names of the stages are that a fruit fly goes through when maturing from a fertilized egg to an adult.

Christiane Nüsslein-Volhard and Eric Wieschaus

15. I showed that RNA could act as its own catalyst. Because of my work, it is no longer correct to state, "all enzymes are proteins".

Thomas R. Cech