

Pioneers and Milestones in Biological Discovery

Biology · Answer Key · 12 Questions

1. Who was the first researcher to coin the term 'cell' in his 1665 publication 'Micrographia' after observing cork tissue?

- A) Antonie van Leeuwenhoek
- B) Robert Hooke**
- C) Marcello Malpighi
- D) Theodor Schwann

2. In 1869, which Swiss biochemist first isolated 'nuclein' (now known as DNA) from the nuclei of white blood cells?

- A) Friedrich Miescher**
- B) Oswald Avery
- C) Phoebus Levene
- D) Albrecht Kossel

3. The first synthetic life form, Mycoplasma laboratorium, was created by researchers at the J. Craig Venter Institute in what year?

- A) 2005
- B) 2008
- C) 2010**
- D) 2012

4. Which scientist is credited with the first experimental demonstration of the 'Central Dogma' flow of genetic information using the bacteriophage T4?

- A) Francis Crick**
- B) Sydney Brenner
- C) James Watson
- D) Arthur Kornberg

5. What was the first organism to have its entire genome sequenced in 1995?

- A) Escherichia coli
- B) Haemophilus influenzae**
- C) Saccharomyces cerevisiae
- D) Caenorhabditis elegans

6. Who was the first to use the term 'genetics' in a private letter written to Adam Sedgwick in 1905?

- A) Gregor Mendel
- B) Hugo de Vries
- C) William Bateson**
- D) Thomas Hunt Morgan

7. The first successful report of an organism being cloned from an adult somatic cell (Dolly the sheep) occurred in which year?

- A) 1994
- B) 1996**
- C) 1998
- D) 2000

8. Which naturalist first proposed the theory of evolution by natural selection in a joint presentation with Charles Darwin to the Linnean Society in 1858?

- A) Jean-Baptiste Lamarck
- B) Alfred Russel Wallace**
- C) Thomas Malthus
- D) Erasmus Darwin

9. The first person to document the existence of microorganisms, which he called 'animalcules', using his self-built single-lens microscopes was:

- A) Robert Hooke
- B) Antonie van Leeuwenhoek**
- C) Jan Swammerdam
- D) Robert Brown

10. In 1952, the Hershey-Chase experiment provided definitive evidence that DNA, not protein, is the genetic material by using which method?

- A) X-ray crystallography
- B) Radioactive labeling of bacteriophages**
- C) Gel electrophoresis
- D) Density gradient centrifugation

11. Who was the first person to describe the process of phagocytosis, identifying the role of white blood cells in the immune system?

- A) Ilya Mechnikov**
- B) Paul Ehrlich
- C) Emil von Behring
- D) Robert Koch

12. The first complete map of the nervous system of a multicellular organism was published for which species in 1986?

A) *Drosophila melanogaster*

B) *Caenorhabditis elegans*

C) *Danio rerio*

D) *Hydra vulgaris*