



PASSAGE 4

Questions 31-40



15 minutes

GHI CHÚ

Các câu hỏi dễ hơn cần ưu tiên trả lời đúng

- ★ Câu hỏi thông tin chi tiết: **32, 33, 34, 36, 37, 40**
- ★ Câu hỏi tham chiếu: **38**
- ★ Câu hỏi từ vựng: **35**
- ★ Câu hỏi ý chính: **31**

Penicillium chrysogenum, or *Penicillium notatum* is a common mold – a fungus that has multicellular arms or filaments called hyphae. It can be found living indoors on food. Its spores, units of asexual reproduction that can evolve into a new organism, and are a major cause of allergens in humans. In 1928, Scottish scientist Alexander Fleming discovered that *Penicillium notatum* contained a bacteria-killing antibiotic that he named penicillin.

Alexander Fleming was born in 1881 in Scotland. At the age of twenty, he entered St. Mary's Hospital in London and studied medicine, then went on to become the assistant bacteriologist to Sir Almroth Wright, a pioneer in immunology and vaccine therapy. During World War I, Fleming served as a captain in the Royal Army Medical Corps and worked on the frontlines where he witnessed firsthand soldiers dying of sepsis. Sepsis, or systematic inflammatory response (SIRS), is blood poisoning due to the presence of bacteria in the blood. Fleming witnessed widespread sepsis, most of which was caused by infected wounds. Antiseptics were widely available yet Fleming believed they killed only surface bacteria while failing to **eradicate** deeper bacteria. After the war, Fleming was determined to find a cure for sepsis. In 1928, while researching the properties of staphylococci, a genus of gram-positive bacteria, he stumbled upon *Penicillium notatum*.

By 1928, Fleming was regarded as a brilliant researcher whose laboratory was, more often than not, a mess. That same year, returning to his lab after an August holiday, he discovered that his staphylococci cultures had been contaminated by a fungus. Fleming was intent on throwing the cultures out when he noticed that the staphylococci colonies had been surrounded by an invading blue-green mold. Much to Fleming's surprise, the invading mold had eradicated the staphylococci **it** had surrounded; whereas, those

colonies of staphylococci that had not been touched by the mold were still thriving. He set about isolating and growing the mold which produced a substance that killed not only staphylococci, but also a number of other disease-causing bacteria, such as pneumonia, scarlet fever, meningitis and diphtheria. He called the bacteria-killing substance "mold juice." Once he'd established that the mold was in fact part of the genus *pénicillium*, he called it penicillin.

In 1929, Fleming published the results of his experiments in the British Journal of Experimental Pathology. Yet despite such initial promise, his work garnered little attention, for growing *pénicillium* was difficult while extracting the antibiotic agent, the bacteria-killing penicillin itself, was even harder. These results, combined with tests proving that penicillin worked slowly, convinced Fleming that penicillin had no commercial appeal. By 1939, Fleming, having labored long and hard over penicillin, finally turned his attention to other matters. Then, in that same year, the Australian scientist Howard Walter Florey, director of the Sir William Dunn School of Pathology at Oxford University, read Fleming's paper in which he described the anti-bacterial effects of *pénicillium*. Florey immediately saw the potential of *pénicillium* and, with the help of Ernst Chain, did more research on the effects of penicillin and produced it on a large scale successfully in the US. By 1943, frontline soldiers with infections were being treated with a new wonder drug called penicillin.

- 31 What is the passage mainly about?
 - A. the history of penicillin
 - B. the use of penicillin
 - C. the production of penicillin
 - D. side effects of penicillin
- 32 According to paragraph 1, what are able to reproduce asexually?
 - A. filaments
 - B. hypha
 - C. spores
 - D. penicillin
- 33 Where did Fleming see evidence of widespread SIRS?
 - A. in the Royal Medical Corps
 - B. in St. Mary's Hospital
 - C. in Ayrshire, Scotland
 - D. in frontline soldiers
- 34 What did Fleming think about antiseptics?
 - A. They were ineffective.
 - B. They killed deeper bacteria.
 - C. They were difficult to be found.
 - D. They were too expensive.

- 35 The word 'eradicate' in paragraph 2 is closest in meaning to
 A. reduce B. surround
 C. protect D. destroy
- 36 What did Alexander Fleming find by chance in 1928?
 A. Pénicillium notatum B. gram-positive bacteria
 C. lysozyme D. sepsis
- 37 According to paragraph 3, what did the blue-green mold do?
 A. It contaminated a fungus. B. It destroyed the staphylococci.
 C. It built colonies of staphylococci. D. It turned into staphylococci cultures.
- 38 The word 'it' in paragraph 3 refers to
 A. the invading mold B. staphylococci
 C. bacteria D. a substance
- 39 What is NOT a disease that a penicillin can cure?
 A. flu B. pneumonia
 C. scarlet fever D. meningitis
- 40 According to paragraph 4, by 1939 what had Fleming concluded?
 A. that penicillin was a wonder drug all would benefit from
 B. that he had wasted his life researching penicillin
 C. that Sir William Dunn should read his 1929 research paper
 D. that penicillin was not economically successful.

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