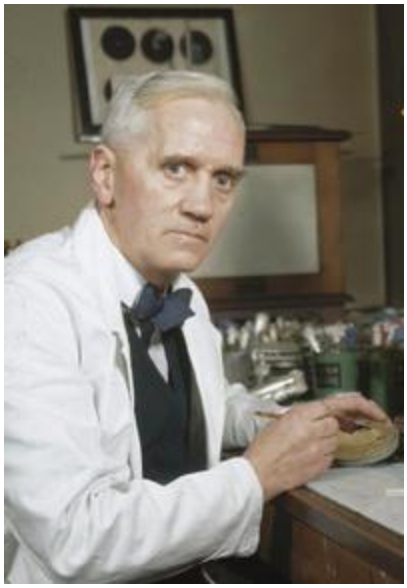
Alexander Fleming.

Published in: Salem Press Primary Encyclopedia, 2019, Topic Overviews K-5

- **Born:** August 6, 1881
- **Birthplace:** Darvel, United Kingdom
- **Died:** March 11, 1955
- **Place of death:** London, United Kingdom

Alexander Fleming is a Nobel prize-winning bacteriologist. He is most famous for discovering penicillin.



Professor Alexander Fleming, in his laboratory at St. Mary's, Paddington, London, c. 1939-45. Official photographer [Public domain]

Sir Alexander Fleming, the discoverer of penicillin. Gabain, Ethel Leontine [Public domain]

Early Life and Career

Fleming was born in Lochfield Farm in Ayrshire, Scotland. His parents were Hugh Fleming and Grace Stirling Morton. He had seven siblings.

He studied in local schools until he moved to London with his older brother. He was thirteen years old. There, he finished schooling at the Regent Street Polytechnic. Afterwards, he worked at a shipping company.

Fleming was able to go to medical school after receiving money from his uncle's estate. He studied at London University's St. Mary's Medical School. He finished in 1906 with distinction.

Before becoming a researcher, Fleming served in the London Scottish Regiment. He was a private and a good marksman.

After his serving in the regiment, Fleming began working in St. Mary's Inoculation Department. His superior was Sir Almroth Wright. Wright was an expert in immunology. He was also a pioneer in vaccine therapy.

During World War I, Fleming was commissioned as a captain of the Army Medical Corps. He worked as a bacteriologist. He also continued studying infections.

Research

During his time in the army, Fleming observed deaths caused by infection. Antiseptics of the time were ineffective. In fact, they made wounds worse.

When Fleming returned to St. Mary's, he studied bacteria that lived in deep wounds. His research was rejected but he continued to pursue it. He discovered lysozyme in 1921. Lysozyme is a weak enzyme that stops bacterial growth.

In 1928, Fleming was working on the influenza virus. By accident, he discovered that fungus developed on contaminated staphylococci. Staphylococcus causes blood poisoning. The mold had a layer around itself that had no bacteria. He experimented further and discovered that it prevented bacterial growth. He identified the mold as part of the *penicillum* genus. It was also nontoxic. Fleming published his study in 1929.

After development and isolation years later, penicillin would be the first antibiotic. It could fight against bacteria that causes diseases such as meningitis, pneumonia, and scarlet fever.

Later Years and Legacy

Fleming received many recognitions in his lifetime. In 1943, he became a Fellow of the Royal Society. He was knighted a year later. He was also elected Emeritus Professor of Bacteriology at St. Mary's in 1948.

In 1945, Fleming was awarded the Nobel Prize in Physiology/Medicine for penicillin. He was honored along with Howard Walter Florey and Ernst Boris Chain. Florey and Chain isolated the antibiotic and helped figure out how to produce it in large amounts. Their work made penicillin available for use in World War II.

Fleming married twice. First was to nurse Sarah Marion McElroy in 1914. They had one son named Robert. Robert Fleming became a doctor. His second wife was Dr. Amalia Koutsouri-Voureka. They married in 1953. She worked with him at St. Mary's.

Fleming passed away at the age of 73. His is buried in St. Paul's Cathedral, London.

Bibliography

Books

Macfarlane, Gwyn. "Alexander Fleming in fact and fantasy." *New Scientist* , vol. 101, no. 13, 1 Mar. 1984, pp. 26-28.

Tan, Siang Yong and Yvonne Tatsumura. “Alexander Fleming (1881–1955): Discoverer of penicillin.” *Singapore Med J* ., vol. 56, no.7, 2015, pp. 366–367.

Websites

Brown, Kevin. “Sir Alexander Fleming.” *Encyclopaedia Britannica* , 12 March 2019, britannica.com/biography/Alexander-Fleming.

“From the archive, 12 March 1955: Alexander Fleming, who discovered penicillin, has died.” *The Guardian* . Guardian News & Media, 12 March 2013, theguardian.com/theguardian/2013/mar/12/penicillin-fleming-alexander-bacteriology.

Markel, Howard. “The Real Story Behind Penicillin.” PBS NewsHour. NewsHour Productions, 27 Sept. 2013, pbs.org/newshour/health/the-real-story-behind-the-worlds-first-antibiotic.

“Sir Alexander Fleming – Biographical.” *NobelPrize.org* . Nobel Media AB, 2019, nobelprize.org/prizes/medicine/1945/fleming/biographical/.

© 2019 by Salem Press, Inc., A Division of EBSCO Information Services, Inc.

This document was generated by a user of EBSCO. Neither EBSCO nor the user who have generated this content is responsible for the content of this printout.
© 2024 EBSCO Information Services, LLC. All rights reserved.
EBSCO | 10 Estes Street | Ipswich, MA 01938