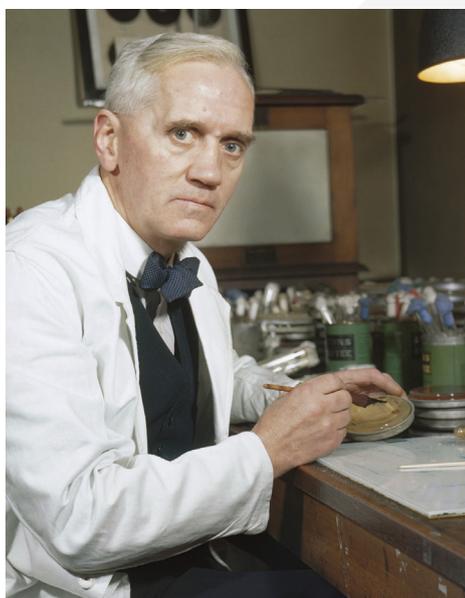




## PAPER

### Bro. Sir Alexander Fleming

**Summary:** Alexander Fleming – Bacteriologist of the modern age.



Professor Alexander Fleming  
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*'For all that Sir Alexander has done to alleviate pain and suffering... the world owes a debt of gratitude difficult to estimate.'*  
Harry S. Truman - 1945

Alexander Fleming was born on 6th August 1881, the seventh of eight children. The family farm was located near the town of Darvel in the county of Ayrshire near the south western coast of Scotland. His father died when he was only seven, and at the age of 13 he was sent to London to live with an older brother, Thomas, who had become a physician there. He continued his education at the Regent Street Polytechnic School, and in 1897, at age 16, he became a clerk with an American shipping company in London.

The Boer War between Britain and the Dutch settlers in South Africa broke out in 1899 and lasted until 1902. To the British, it was patriotic war, and many Britons came forward to serve their country. Fleming was caught up in the fervour, and enlisted in the reserves, joining the

London Scottish Rifles Regiment in 1900, where he remained a member for the next 14 years; though he was never called up for service in South Africa.

In 1901, he received a small inheritance from his uncle, and influenced by his brother Thomas, enrolled in St. Mary's Hospital Medical School. Upon graduation, he joined the bacteriological department of that same hospital where he was to remain for the rest of his days.

When World War I broke out in 1914, Fleming served as a Captain in the Royal Army Medical Corps, together with several staff members of the hospital, who were drafted to serve in a wound research laboratory in France. During Fleming's tour of duty he saw at first hand the horrors of war, and studied the effect of wounds on the human body. He noted that in almost all wound cases, the damage done by a bullet or shrapnel was not nearly as fatal as the subsequent infection caused by dirt, debris, bits of uniform, and the insanitary conditions around the wound. There was no such thing as a clean wound. Gangrene and infection set-in, and were the cause of more battle deaths than the wounds themselves. The contrast between pre and post-penicillin days can never be over emphasized.

Fleming was aware that the human body has amazing, and its built-in, curative powers, in the shape of antibodies, part of its own immune system, was able to overcome most of the day-to-day ailments and bacterial infections which have plagued mankind. He also knew that there were other, more serious, diseases which had no built-in defences, but could be overcome by inoculation and vaccination. However, there were many serious diseases for which no cure had yet been found, and he was determined to devote his life to finding a solution to what he considered a major threat to mankind.

On his return from France, Fleming returned to his research at St. Mary's Hospital, having an additional incentive to search for an up-to-then elusive antibiotic. He persisted in his research with ever-increasing dedication, and made progressive discoveries, learning more all the time. It was, however, not until 1928 that he finally achieved a breakthrough.

As a bacteriologist and researcher, his life and efforts were spent in his laboratory amid bacterial cultures, dishes, enzymes, serum, blood, test tubes, and microscopes. He had no sense of neatness, and his lab was constantly cluttered with experiments in various stages of development.

On one occasion in 1928, he had cultured a growth of *staphylococcus* bacteria, and then gone on a two-week holiday. Upon his return, he discovered a growth of mould on the culture plate, which had halted the growth of the bacteria. The mould had somehow blown in on the air and contaminated the plate. Fleming was able to isolate, study, and identify the mould as a variant of *penicillium notatum*, which he named *penicillin*.

The following year, he published the results of his observations on penicillin's antibiotic properties in a British medical journal. Although he realised the importance of his discovery, he felt frustrated, knowing that the production of penicillin was extremely limited, and not available to the general public. This frustration was brought close to home when he was unable to help his own brother, John, who succumbed to pneumonia in 1937.

It took World War II however, and the desire to reduce losses from infectious wounds, to stimulate the drive into finding a way to further refine and mass produce this truly miraculous drug. A team of scientists from Oxford University, specifically Ernst Chain, Howard Florey, *et al*, were able to accomplish this. By D-Day, the use of penicillin among the wounded became widespread and preserved the lives of untold numbers.

Penicillin was not just a treatment for infectious war wounds, but a new cure for many other scourges of humanity; especially staphylococcus, pneumonia, gonorrhoea, streptococcus, diphtheria, scarlet fever, meningitis, syphilis, and many others diseases for which effective cures had not previously existed.

People today take antibiotics for granted, and assume that their existence and use are natural. It should not be forgotten however, that penicillin therapy is probably the greatest single medical advance in history.



*Penicillium chrysogenum* or *P. notatum*  
(formerly)  
*Crulina 98* [CC BY-SA 3.0]

Alexander Fleming's altruistic ideals were of the highest and he did not receive a penny for his discovery; he never felt that he should have. He was knighted in recognition for his work in 1944, and received the Nobel Prize in Physiology or Medicine in 1945, which he shared with Howard Florey and Ernst Chain.

follows :-

PROMOTIONS.

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*Promotions listed in the proceedings of "An Especial Grand Lodge" held in March 1948*

These ideals had always been with him, and early in his life, he embraced the tenets of Freemasonry. During his years as a medical student at St. Mary's, he became a Freemason<sup>1</sup> and, eventually an active participant in several London Lodges, including his Regiment's and the London Scottish Rifles Lodge No. 2310. He subsequently became Master of Sancta Maria Lodge No. 2682

in 1925 and, later served as its Secretary. In 1935, he became Master of Misericordia Lodge No. 3286, later serving as its Treasurer.

By now his Masonic dedication had come to the attention of the Grand Lodge of England, and he was elected Senior Grand Deacon in 1942, and Past Junior Grand Warden in 1948.<sup>2</sup> This fraternal dedication was also recognised by Freemasonry outside Britain, and in 1953, he received the Distinguished Service Citation of the Grand Lodge of New York.

Much has been made not only of 'Person of the Century', but also of 'Person of the Millennium.' Fleming's name can legitimately be considered for either or both, for by his efforts, dedication and ideals the world has become his beneficiary. He died from a heart attack on March 11th, 1955, at the age of 73. He was buried in St. Paul's Cathedral where he joined the ranks of those who belong to the ages. He had been a dedicated Freemason for 50 years and has forever earned his place beside the immortals of history.

## Bibliography

1. Harper, Paul, Famous Freemasons - A Prologue, <https://solomon.ugle.org.uk/mod/resource/view.php?id=2084>

## References

1. <https://www.ugle.org.uk/about-freemasonry/famous-masons/23-sir-alexander-fleming>
2. Grand Lodge honours were conferred by the M.W., His Grace the Duke of Devonshire, K.G., Grand Master, at his Installation, by George VI, held at the Royal Albert Hall on March 23rd 1948.

## Recommended use of Papers

Papers offer a simple, direct means of advancement in a particular aspect of Masonic knowledge. They can be used in a variety of ways:

- Read at home for private study
- Shared for pre-reading by members of a discussion group
- Read aloud in Lodge or Chapter, or in an LOI/COI/new members forum
  - Followed by 'any questions'
  - As a precursor to a discussion (in which case much more time is needed, possibly more than double that allocated to the paper itself)
  - Supported by audio-visual aids, if necessary

They can be delivered by a single person or split into bite-sized pieces and read by multiple presenters (in which case, the speaker(s) should have read and practiced the delivery of the paper beforehand).

\*Note: All biblical passages are taken from the Authorized King James version unless otherwise specified.

If the paper is to be used to introduce a discussion, the presenter will need to have thought about the material, done a little research, and prepared some open questions to engage with the audience. Kipling's dictum can be of help in preparing open questions, which should begin with one of his 'serving men', as follows: *'I keep six honest serving men (they taught me all I knew). Their names are, What and Why and When and How and Where and Who'*. Rudyard Kipling

If used as part of an event, the paper should be advertised and promoted by way of trailers, flyers and announcements, in summonses, letters, emails, notice boards, and on social media.

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