

# Evolution of public health assignment



**ASSIGN  
BUSTER**

## Evolution of Public Health: Sir Alexander Fleming University of Phoenix

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I have obtained written permission from the copyright holder for any trademarked material, logos, or images from the Internet or other sources. I further agree that my name typed?? on the line below is intended to have, and shall have, the same validity as my handwritten signature. Evolution of Public Health: Sir Alexander Fleming The discovery of penicillin by Sir Alexander Fleming is believed to be one of the greatest gifts every made to humankind. This discovery introduced the era of antibiotics to the world (Calvo, 2000).

Staphylococcus aureus causes various pus-forming infections such as boils, styes, pneumonia, urinary tract infections, and more seriously osteomyelitis and endocarditis (Todar, PhD,?? 2008). The recurring theme of Sir Fleming's career was to find a chemical substance that would kill infections bacteria without killing surrounding tissue (" Sir Alexander Fleming,"?? 2004). Sir Alexander Fleming was a Scottish bacteriologist in the 20th Century. He was taught by his father, Hugh Fleming, how to develop observation skills and reasoning abilities.

At 13, he was forced to leave Scotland to find work in London, England, where he lived with his brothers. While living in London, he attended Polytechnic School and after being left an inheritance by an uncle, he was able to attend medical school at St. Mary's Hospital Medical School (" Sir Alexander Fleming,"?? 2004). He eventually received his licentiate from the Royal College of Physicians and chose bacteriology as his specialty, where he worked with the Inoculation Department, later renamed Wright-Fleming Institute.

There he worked with Sir Almoth Wright, the father of vaccinotherapy. Work at this time mostly centered on finding a treatment for syphilis. In 1908, Fleming passed his medical examinations and served in World War I on the Royal Army Medical Corps, where according to the World Encyclopedia of Biography (2004), he " specialized in the treatment of wounds by antiseptics. " This is where he first noticed that phagocytosis showed to be more prevalent in war wounds than those in ordinary wounds. He then advised physicians to remove all necrotic tissue.

He also observed that antiseptics did not prevent gangrene, but encouraged growth (" Sir Alexander Fleming,"?? 2004). In 1928, Fleming accidentally observed on a culture of staphylococci that should have previously been discarded, that the mold *Penicillium notatum* had accidentally been introduced by accidental contamination and had destroyed the staphylococci colonies. Lacking a chemist or biochemist on staff to extract and concentrate the substance, Fleming challenged others to try. It was not until 1939 that Howard Florey and Ernst Chain took the challenge.

Using newly available technology, they were able to extract the drug in its purest form and discovered it to be “ a million times more powerful” than Fleming’s early discovery (“ Sir Alexander Fleming,”?? 2004). It was not until 1942 that the first human trials were begun due to small supplies of penicillin. At first it was used only on military personnel due to its effectiveness in the battle field. Manufacturing of the medication began in England and the United States of America in 1943. When supplies were available in 1944, penicillin was made available to the world as a treatment for various staphylococcus infections.

In 1944 Alexander Fleming was knighted by Queen Elizabeth for his work (Calvo, 2000). Sir Alexander Fleming was awarded the Nobel Peace Prize along with Ernst Chain and Sir Howard Florey, according to?? The Nobel Foundation??(2010), “ for the discovery of penicillin and its curative effect in various infectious diseases. ” After receiving the Nobel Prize, Fleming toured the United States, where to the science and medical communities; he was thought to be a hero. Many American chemical companies donated \$100,000 to Fleming for his work, he refused to use such contributions for personal use and instead, he gave all contributions to his institute to help further research in bacteriology. In 1946 Fleming was named director of the Institute, which he held until 1955. Sir Alexander Fleming’s discovery of penicillin, in 1928, forever changed the way that the medical community treated infectious diseases. Without his contribution, along with Chain and Florey, millions of people would have died. This discovery also opened the doors for numerous other discoveries of medications to treat different types of infections.

Sir Fleming dedicated his life to finding effective treatments for infections without further harming the patient. His dedication brought science and medicine together in perfect harmony for the benefit of the world.

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