



Keio Business School

Discovery of Penicillin

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Penicillin was the world's first antibiotic to be used in practice, and is said to be the greatest drug of the twentieth century. Countless lives have been saved in the past because of penicillin. Some people also imagine that, without antibiotics, infectious disease would have caused the global population to be far smaller than it was during the twentieth century. Penicillin was not a discovery attributable to some corporate research and development. (Patents for semisynthetic penicillins have been acquired by many different companies.) British scientist Alexander Fleming (1881–1955), who discovered penicillin, said:

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“Adventurous steps toward some new subject matter always hinge on an individual's conception and determination. If I had been attached to any organization at the time of the serendipitous advent of penicillin a long time ago, I doubt I would have ever noticed this ‘abnormality’ which had absolutely nothing to do with my primary research. It is because I did not belong to any group at the time that my personal interests led me to be sidetracked so completely unexpectedly.” (excerpt from Hideki Takamatsu, *Souzou-wa Tensai-dake no Mono-ka* [Is Creation Confined Merely to Geniuses?])

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Doctor Fleming

During the World War I, Fleming was in wartime France as a researcher with the Royal Army Medical Corps. Soldiers during this war were more likely to lose their lives to infected and festering wounds than they were to be killed directly by a bullet or explosion. Antiseptic and antipyric drugs at the time could not be used on gaping war wounds because they would cause too much damage to living tissue. Almost every day, young soldiers died in vain while suffering their wounds. With all his skills as a physician, Fleming could not help them. Fleming was impelled by the desire to create a potent drug by any means necessary.

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