



Sir Alexander Fleming

- Prof. Ashwini T. Pawar

Sir Alexander Fleming

The Nobel Prize in **Physiology or Medicine** 1945

Born: 6 August 1881, Lochfield, Scotland

Died: 11 March 1955, London, United Kingdom

Sir Alexander Fleming was a Scottish physician and microbiologist best known for discovering the world's broadly effective antibiotic which he named as Penicillin. His discovery is described as single greatest victory ever over disease.

He born on 6 August 1881 at Lochfield farm near Darvel in Ayrshire, Scotland. He was the third of four children of his farmer parents. Fleming went to Loudoun Moor School and Darvel School. In 1906 he qualified with an MBBS degree from the St. Mary Hospital Medical School in Paddington. He was assistant bacteriologist to Sir Almuth Wright, a pioneer in vaccine therapy and immunology. In 1908 he gained a BSc degree with gold medal in Bacteriology and became a lecturer in 1914. He had huge interest in research. when he was working on staphylococcus bacteria which cause boils and throat pain, after returning back from holiday he found mould growing on bacterial culture plate. He noticed that mould seemed preventing the bacteria around it from growing. He identified that mould penicillium produced chemical that could kill bacteria.

The discovery of penicillin changed the world of medicine enormously with its development, infections that were previously severe and often fatal, like pneumonia Meningitis, T.B. typhoid could be treated easily. Before **penicillin** there was no effective treatment for diseases like



Gonorrhoea, Rhumatic fever, Cholera and food poisoning. Hospitals were full of **people with blood poisoning contracted from** cut or scratch and Doctors could do little for them but wait and **hope**. Before penicillin drugs like sulphonamide and **Arsenicals as well as** number of disinfectants made with metal ions toxic to bacteria, such as Mercury or copper were in use well before the introduced of penicillin .

Fleming served throughout World War I in the Royal Army Medical corps, and was mentioned in dispatches. He and his many colleagues worked in battlefield hospitals at the Western Front in France.

Discovery of penicillin could save life of thousands of soldiers in Second World War. When Fleming learned of Robert D. Coghill and Andrew J. Moyer patenting the method of Penicillin production in US in 1944 he was furious and commented

I found Penicillin and have given it free for the benefit of humanity. Why should it become a profit making monopoly of manufacturers in another country?

For his discovery he shared Nobel Prize in Physiology or medicine in 1945 with Howard Florey and Ernst Boris chain. He also discovered lysozyme enzyme from his nasal discharge (Mucus). He named this substance **LYSOZYME**, which is a combination of the word "lysis"-dissolution and the word "enzyme" – a protein that catalyse chemical reaction. **LYSOZYME** is an enzymatic protein, made up of 129 amino acids .He described the details of his research in an article published in 1922.

Alexander Fleming joined Bacteriological department of St. Mary's Hospital, London, soon after a series of prize success as a medical student, and had remained there throughout his life, save for specialist service in the R.A.M.C in the first world war. He was professor there from 1928 to 1948. Sir Alexander Flemming, who discovered penicillin, died sudden at his home in Chelsea, London, yesterday after a heart attack.

References :

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