



LARGER THAN
LIFE
A CELEBRATION OF GREATNESS

Louis Pasteur
1822 - 1895

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INTRODUCTION

Louis Pasteur was a **French chemist best known for his remarkable breakthroughs in microbiology.** His experiments confirmed the germ theory of disease, also reducing mortality from puerperal fever (childbed), and he created the first vaccine for rabies. He is best known to the general public for showing how to stop milk and wine from going sour - this process came to be called **pasteurization.**

He is regarded as one of the three main founders of bacteriology, together with Ferdinand Cohn and Robert Koch. He also made many discoveries in the field of chemistry, most notably the asymmetry of crystals.

BIRTH AND EARLY LIFE

Louis Pasteur was born on 27 December 1822 in Dole in the Jura region of France. His father was a tanner. In 1847 he earned a doctorate from the Ecole Normale in Paris. After several years' research and teaching in Dijon and Strasbourg, in 1854 Pasteur was appointed professor of chemistry at the University of Lille.

Three years later he returned to the Ecole Normale as director of scientific studies, a post he retained until 1867, when he became professor of chemistry at the Sorbonne.

CONTRIBUTIONS TO MICROBIOLOGY AND MEDICINE

- He championed changes in hospital practices to minimize the spread of disease by microbes.
- Pasteur was invited to solve a problem in the fermentation of beer that affected its taste and rendered it undrinkable. He showed that this was caused by bacteria that could be killed by heat. In **this way he invented the process for heat treatment to kill harmful bacteria,** first applied to the making of beer, then to milk. This process has been known ever since as **pasteurization.**
- Pasteur's various investigations convinced him of the rightness of the **germ theory of disease,** which holds **that germs attack the body from outside.** Many felt that such tiny organisms, as germs could not possibly kill larger ones such as humans. Pasteur now extended this theory to explain **the causes of many diseases - including anthrax, cholera, TB and smallpox - and their prevention by vaccination.**
- In 1865, he was asked to **help the silk industry in southern France,** where there was an epidemic amongst the silkworms. With no experience of the subject, he identified parasitic infections as the cause and **advocated that only disease-free eggs should be selected.** The industry was saved.

- He discovered that weakened forms of a microbe could be used as an immunization against more virulent forms of the microbe.
- He found that rabies was transmitted by agents so small they could not be seen under a microscope, thus revealing the world of viruses. As a result he **developed techniques to vaccinate dogs against rabies,** and to **treat humans bitten by rabid dogs.**

HONORS AND FINAL DAYS

In 1888, a special institute was founded in Paris for the treatment of diseases. It became known as the Institute Pasteur. University Louis Pasteur was also named after him. Pasteur won the Leeuwenhoek medal, microbiology's highest honor, in 1895.

He was a Grande Croix of the Legion of Honor-one of only 75 in all of France. **Pasteur was director of the Institute Pasteur until his death on 28 September 1895.**

He was a national hero and was given a state funeral. He was buried in the Cathedral of Notre Dame, but his remains were reinterred in a crypt in the Institute Pasteur, Paris where he is remembered for his life-saving work.

Quotes By Louis Pasteur

“Let me tell you the secret that has led me to my goal.
My strength lies solely in my tenacity.”



“Do not let yourself be tainted with a barren skepticism.”



“It is surmounting difficulties that makes heroes.”



“When I approach a child, he inspires in me two
sentiments; tenderness for what he is, and respect for
what he may become.”



“Chance favors the prepared mind.”