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**Louis Pasteur - II**

**Lead: One of the greatest scientists of this era was one of the pioneers of the science of microbiology. His discovery that germs cause most familiar diseases is one of the fundamentals of modern science.**

**Intro.: *A Moment in Time* with Dan Roberts.**

**Content: In 1865, the ever-practical Pasteur began work on diseases that were threatening the silk industry. Production was flagging and Pasteur was being called on to save domestic silk production. He discovered a microscopic parasite,**

**which along with faulty nutrition, were the culprits. It took three years to come to these conclusions, but soon the industry was on the rebound.**

**Yet perhaps Pasteur's greatest contribution was his firm establishment of the concept of germ theory. About 1877 he began studying anthrax and soon demonstrated that the disease was able to stay alive in the carcasses of dead animals and even in fertile soil. It survived in the form of highly resilient structures called spores. At the same time he began agitating for a change in hospital practices based on germ theory. Up until then sanitation was a very low priority was placed on sanitation. Hospitals were deadly**

**places where surgeons would operate on multiple patients without washing their hands between each procedure. Pasteur's efforts were an inspiration to Joseph Lister in the development of antiseptic surgery.**

**His final years were spent exploring vaccination and its effect on the immune system. In this he was following the work of Edward Jenner who in the 18<sup>th</sup> century had used an attenuated or weakened form of cowpox to prevent smallpox. First in chickens against cholera, then in goats and sheep against anthrax, and finally in dogs and humans against rabies, Pasteur paved the way for modern disease prevention. His accomplishments are all the more**

**amazing in that he was partly paralyzed after a stroke in 1868. He founded the Pasteur Institute in 1888 and led its work until his death seven years later.**

**At the University of Richmond, this is Dan Roberts.**

**Resources**

**Conant, James B., ed. *Pasteur's and Tyndall's Study of Spontaneous Generation*. Harvard: Harvard University Press, 1953.**

**Crellin, J.K. *Pasteur and the Germ Theory*. New York: Viking Press, 1968.**

**Koprowski, Hilary, and Stanley A. Plotkin. *The World's Debt to Pasteur*. New York: Liss Publications, 1985.**

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