

Topic Page: [Bernard, Claude, 1813-1878](#)

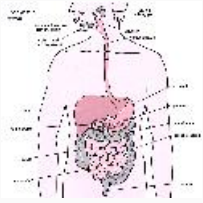


Image from: [digestive system in *The Royal Society of Medicine Health Encyclopedia*](#)

Summary Article: **Bernard, Claude (1813-1878)**

From *The Hutchinson Dictionary of Scientific Biography*

Place: France

Subject: biography, biology

French physiologist whose research and teaching were vitally important in founding experimental physiology as a separate discipline, distinct from anatomy, in the middle part of the 19th century.

Bernard was born on 12 July 1813 in St Julien, in the Beaujolais region of France. The son of a wine grower, Bernard originally wanted to be a playwright. On the advice of a theatre critic he started to study medicine, qualified in 1839, and became a research assistant to the physiologist François Magendie at the Collège de France in Paris. He graduated MD in 1843 but never practised medicine, preferring to develop his career in experimental physiology. He experienced great difficulties in obtaining suitable positions at the beginning of his career but in 1854 a chair of general physiology was created for him at the Faculty of Sciences in Paris, and the following year he succeeded Magendie to become professor of medicine at the Collège de France. He received numerous honours during his lifetime including the Legion of Honour and, after his death on 10 February 1878, was given a state funeral.

Bernard performed a series of important experiments on the physiology of digestion, showing that pancreatic secretions were important in fat metabolism, revealing the importance of the digestive activities of the small intestine, and investigating the mechanisms of nervous control of gastric secretion. He also discovered glycogen from experiments on the perfused liver; revealed the function of nerves that control the dilation or contraction of blood vessels, and investigated the physiology of fetal tissues and the nutritive role of the placenta. He made major investigations into the role of drugs such as curare and opium alkaloids and their effects on the nervous system. His most important contribution to physiological theory was the concept of the 'milieu intérieur' - that life requires a consistent internal environment that is maintained by physiological mechanisms. Bernard was an ardent teacher of the new experimental physiology and young physiologists from around the world went to Paris to train in his laboratory. His major didactic work was *Introduction to the Study of Experimental Medicine* (1865), which provided a comprehensive treatise on the role of experimental research as the basis for medicine.

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Chicago

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