

Emil von Behring (1854–1917)

The German bacteriologist and Nobel Prize winner Emil von Behring ranks among the most important medical scientists. Behring was born in Hansdorff, West Prussia, as the son of a teacher in 1854. He grew up in narrow circumstances among eleven brothers and sisters. His desire to study medicine could only be realized by fulfilling the obligation to work as an military doctor for a longer period of time.

Between 1874 and 1878 he studied medicine at the *Akademie für das militärärztliche Bildungswesen* in Berlin. In 1890, after having published his paper *Ueber das Zustandekommen der Diphtherie-Immunität und der Tetanus-Immunität bei Thieren*, he captured his scientific breakthrough. While having worked as Robert Koch's scientific assistant at the Berlin Hygienic Institute he had been able to show – together with his Japanese colleague Shibasaburo Kitasato (1852–1931) – via experimentation on animal that it was possible to neutralize pathogenic germs by giving „antitoxins“. Behring demonstrated that the antitoxic qualities of blood are not seated in cells, but in the cell-free serum. Antitoxins recovered of human convalescents or laboratory animals, prove themselves as life-saving when being applied to diseased humans.

At last – due to Behring's discovery of the body's own immune defence and due to his development of serotherapy against diphtheria and tetanus – a remedy existed which was able to combat via antitoxin those infectious diseases which had already broken out. Having developed a serum therapy against diphtheria and tetanus Behring won the first Nobel Prize in Medicine in 1901. Six years before, in 1895, he had become professor of Hygienics within the Faculty of Medicine at the University of Marburg, a position he would hold for the rest of his life. With the aid of the prize money of two million Reichsmark Behring founded the Behringwerke in Marburg in the year 1904. Up to now vaccines are produced in place.