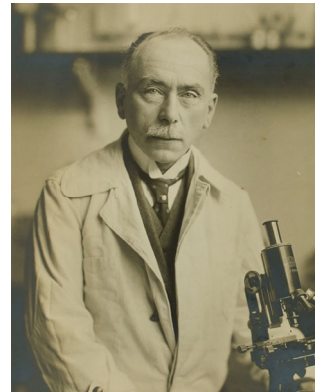

Curriculum Vitae Professor Dr Jules J. B. V. Bordet

Name: Jules Jean Baptiste Vincent Bordet
Life Dates: 13 June 1870 - 6 April 1961



Jules Jean Baptiste Vincent Bordet was a Belgian biologist. He was awarded the Nobel Prize in Physiology or Medicine in 1919 for his work on the immune system. The bacterium *Bordetella pertussis*, which Bordet identified as the pathogen of whooping cough in 1906, was named after him. In addition, he later developed a vaccine against this disease.

Academic and Professional Career

Jules Bordet studied medicine in Brussels. In 1892, he received his doctorate from the university there. Two years later, supported by a scholarship from the Belgian government, he went to Paris to work at the Pasteur Institute. There he joined the laboratory of Elie Metchnikoff, the Nobel Prize laureate in Physiology or Medicine of 1908, where he worked on, among other things, how bacteria in the bloodstream are eliminated by the immune system. In 1901, he moved back to his home country, where he set up a newly founded Pasteur Institute near Brussels, of which he became director. In Belgium, he continued his studies on immune defence.

Together with his brother-in-law, the Belgian Bacteriologist Octave Gengou, he succeeded in identifying the causative agent of whooping cough in 1906. A year later, he was appointed professor of bacteriology at the University of Brussels.

In addition, Jules Bordet was publicly involved in political issues on several occasions, for example, when he joined other scientists in a report to the League of Nations in Geneva in 1924 calling for a worldwide ban on poison gas. He also supported the petition of the American Chemistry and Nobel Peace Prize winner Linus Pauling to ban nuclear weapons testing in the 1950s.

In later years of his scientific activity, Jules Bordet was increasingly supported by his son. After he retired in 1940, Paul Bordet took over the Pasteur Institute. Jules Bordet himself remained with the institution as honorary director.

Nobel Prize in Physiology or Medicine 1919

In the laboratory of Nobel Prize winner Elie Metchnikoff, Jules Bordet made his most important discoveries in the field of immunology and bacteriology as a young man. In addition, he conducted research on diagnostic tests of blood serum. Above all, he was driven by the question of how the immune system could eliminate bacteria in the bloodstream. Previously, the bacteriologist Hans Buchner, a brother of Nobel Prize laureate in Chemistry Eduard Buchner, had already described that fresh blood serum is generally able to kill certain bacteria. Hans Buchner went on to say that the serum loses this ability as soon as it is heated to 56 degrees Celsius. From this, Jules Bordet concluded that bacteriolysis depends on two factors: on a specific antibody that is present in the serum of immunised individuals but secondly also on a non-specific but heat-sensitive factor that is present in any serum.

In his medical research, Jules Bordet also took advantage of events in his private environment. In 1906, when his young daughter fell ill with an aggressive cough, Bordet was able to isolate the pathogen that causes whooping cough from the mucus (sputum) she produced. He succeeded in cultivating the bacterium in a special medium. He also detected specific antibodies against this bacterium in the child's serum. In addition, he was able to show that an endotoxin produced by this bacterium is responsible for the severe and protracted symptoms of whooping cough. Together with his brother-in-law, the Belgian bacteriologist Octave Gengou, he later developed a vaccine against whooping cough, which was introduced in 1933.

For these and other achievements in the field of immunology, Jules Bordet was awarded the Nobel Prize in Physiology or Medicine in 1919. Because Europe was still suffering from the consequences of the First World War, which had just ended, Bordet was unable to accept the honour until one year later, on the occasion of the awarding of the Nobel Prizes in 1920.

Honours and Awarded Memberships

Jules Bordet received numerous other awards for his scientific achievements, including the Habsen Prize (1913) and the Cameron Prize (1921). In addition, many universities awarded him honorary doctorates, including Cambridge, Caen, Edinburgh, Montpellier, Nancy, Paris and Strasbourg. Jules Bordet was also a member of numerous scientific academies, including the Royal Society (1916), the German Academy of Sciences Leopoldina (1932) and the Academies of Sciences in France, Denmark, Italy and the United States of America.

Personal Details

Jules Bordet was born on 13 June 1870 in Soignies, Belgium. In 1899 he married Marthe Levoz. They had two daughters and one son, Paul. The latter was later also appointed professor of bacteriology at the University of Brussels and succeeded his father as director of the Pasteur Institute. Jules Bordet passed away on 6 April 1961 in Brussels, Belgium.