

**The studies on cancer aetiology in the 19th century and the Brazilian physicist
Alfredo Leal Pimenta Bueno**

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The 19th century was a period of strong incidence of researches on cell functioning. The advent of new microscopy techniques allowed for a more comprehensive study of the cells behavior, and thus for a better understanding of the conditions likely to trigger the development of tumors. From that moment on, several scientists suggested conceptual, medical and institutional pathways of research on and treatment of disease. Here I analyzed the studies on the aetiology of cancer developed along the 19th and beginning of the 20th century. I sought to understand how the concepts related to the mechanisms of disease were constructed and reinterpreted along this period worldwide and also in Brazil. In this regard, I focused on the work by the Brazilian physician Alfredo Leal Pimenta Bueno*, who described his ideas on the biochemical phenomena that could trigger cancer in a series of scientific articles published in the scientific journal *O Brasil Médico* between 1926 and 1928.

I could establish that cancer became increasingly more discussed and studied in the mid-19th century. This phenomenon seems to relate to an increase in the research focusing on cell functioning headed by scientists such as Johannes Müller (1801-1858) and Rudolf Virchow (1821-1902), whose work allowed for better understanding of the conditions likely to trigger the development of tumors. In Brazil, the perception of cancer as a public health problem began to change in the early decades of the 20th century, mostly based on the work by physicians Antônio Augusto de Azevedo Sodré (1864-1929) and Olympio Viriato Portugal (1862-1934). As I further point out, this development occurred within a context in which the medical attention still focused on diseases with greater social impact, such as tuberculosis. At the same time, I found that Pimenta Bueno developed his theory on the aetiology of cancer based on the writings of several scientists — mainly Italian, French and German —, having resource to them whenever it was necessary to justify his own points of view. By doing so, Pimenta Bueno concluded that different agents could cause cancer by producing irritation, which resulted in overhydration inside cells that would thus return to their embryonic stage and, finally, reacquire their proliferation capacity.

Keywords

History of science; History of medicine; Brazil; Cancer; Aetiology

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**There is no available data related to the Pimenta Bueno's date of birth and death.