

" Medical science in Colonial Senegal: the Pasteur Institute of Dakar and the Quest for a Yellow Fever Vaccine, 1924-1945."

This paper explores an often neglected aspect of globalization in a colonial setting, the transfer of scientific technology. The first institution of French colonial science in West Africa, the Pasteur Institute of Dakar (PID) opened officially in 1924. Its duties included on-going research into bubonic plague, yellow fever, and malaria, and the manufacture and distribution of anti-smallpox and anti-plague vaccines. Hampered by poor leadership and working at cross-purposes with the Colonial Senegalese Health Department, the PID's record was initially undistinguished and mediocre, in comparison with more dynamic Pasteur Institutes in Madagascar, Tunisia, and Algeria. Nor did it seek to train Senegalese personnel in research, confining them to low-level subordinate roles. Beginning in the 1930's however, the PID scored spectacular successes in its competition with the Rockefeller Foundation to develop an anti-yellow fever vaccine. Researchers at the PID became the first anywhere to isolate a strain of the yellow fever virus, taken from a Syrian patient in Dakar. Jean Laigret of the PID developed the world's first vaccine in 1934. Despite the world-wide acclaim, the vaccine's undesirable side effects led to the development of the new and improved Peltier-Durrieux vaccine, known as the "Dakar scratch vaccine", which was combined with smallpox virus to provide dual protection by means of a single scratch on the arm, a method which required no syringes, hollow needles, or sterilization apparatus. As a result, beginning in 1940, with the PID providing the combined vaccine, more than 56 million doses were administered throughout French Africa over the next 13 years.

The PID provides a case study of how colonial science sought to control an infectious disease more dangerous to stranger Europeans than to seasoned Senegalese. The majority of the population's greater vulnerability to malaria and to gastrointestinal ailments might have dictated a different set of priorities for the PID. A case study of the PID illustrates how public health policy reflected colonial power but not necessarily local needs.

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