SCIENTIFIC INSTITUTIONS IN LATIN AMERICA

THE OSWALDO CRUZ INSTITUTE (INSTITUTO OSWALDO CRUZ)*

Manguinhos, Rio de Janeiro, Brazil

Director: Dr. Cardoso Fontes

The Oswaldo Cruz Institute, like the Butantan, was first established for the manufacture of plague vaccine and serum, after the initial outbreak of that disease in Santos in 1899. Organized under the administrative direction of Baron Pedro Affonso, the "Federal Institute of Serum-therapy" was inaugurated July 23, 1900, on the old *fazenda* or farm known as Manguinhos, about 50 minutes ride from the center of Rio de Janeiro.

Under the scientific leadership of the great Oswaldo Cruz, who soon (1902) became its Director (and who was also Director of Public Health of Brazil), the Institute rapidly became world-famous. When Brazil received first prize at the Berlin Congress and Exhibition of Hygiene in 1907 as the result of the reputation achieved by the Institute, the national legislature finally passed the long-pending decree formally establishing it as the "Institute of Experimental Pathology." On March 19, 1908, the name was changed to Oswaldo Cruz Institute in honor of the Director, who had eradicated yellow fever from Rio.

The story of the development of the Institute from its beginnings in the residence quarters originally built for the personnel of the abandoned city incinerators which stood on the farm donated by the municipality to the government, to the present research center with its distinctive main building of five floors, designed in Moorish style by the architect Luis de Moraes, its auxiliary pavilions, hospital, stables, animal houses and excellent technical equipment, is a fascinating one, studded with the names of scientists, both native and foreign, who were to become noteworthy for their achievements in various fields of research.

Mention can be made only of some of the high points, including the beginnings of a School of Experimental Medicine as early as 1901 with the opening of the facilities of the Institute to research students; initiation in the same year of the series of notable publications on mosquitoes; the discovery in 1906 by Godoy, who turned all rights in it over to the Institute, of a vaccine against black-leg of cattle (symptomatic anthrax),

* One of a series of papers describing the principal scientific institutions in Latin America.

proceeds from the sale of which enabled the Institute to enlarge its activities; and in 1909, the discovery by Carlos Chagas of the disease bearing his name (American trypanosomiasis, Chagas' disease); and the appearance in the same year of the first number of the *Memorias do Instituto Oswaldo Cruz*. Thirty-three volumes of the *Memorias*, containing 544 papers, were published from 1909 to 1938, and the total number of papers by members of the staff from 1900 to 1938 was 2,269.

The Institute was scarcely a year old before it had extended its activities far beyond the manufacture of plague vaccines and sera; today its fields of research include Bacteriology, Immunology, Virus diseases, Protozoology, Pathology, Physiology, Mycology, Medical Zoology, (Helminthology, Entomology, and so on), Physics and Chemistry. Since 1911 the staff of the Institute has given a two-year course for medical students and young physicians desiring to specialize in laboratory work and scientific research.

The manufacture of biologic products for curative and preventive treatment of diseases of man and animals is an important part of the work of the Institute. Commissions are sent to investigate such matters as epidemics of malaria, plague and yellow fever; to assist in organizing laboratories in other cities, and to undertake other special studies.

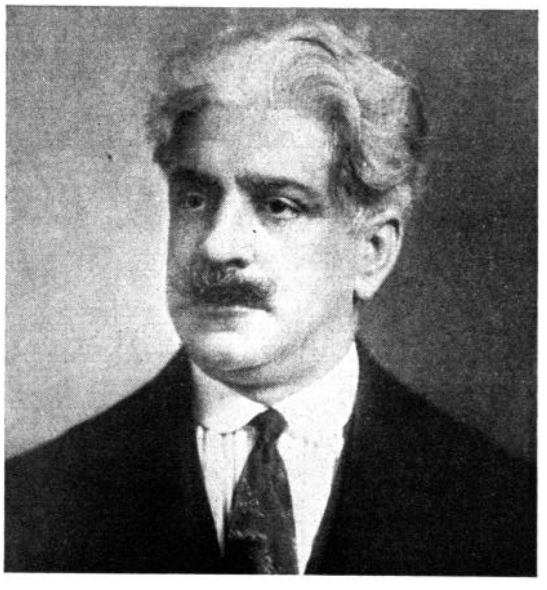
The Oswaldo Cruz Institute has a library of 76,303 volumes and 2,470 different scientific publications, of which 859 are obtained in exchange for the *Memorias*. It has a museum rich in entomological specimens, poisonous animals, pathological exhibits, cultures, and macroscopic and microscopic preparations.

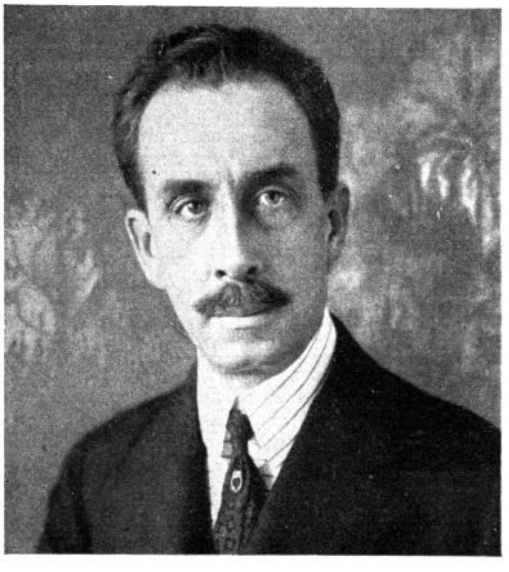
Among the outstanding papers published by the Institute in the course of its existence have been those on medical zoology and entomology, especially mosquitoes, parasitic protozoa, and ticks; plague vaccination and serum-therapy; malaria, smallpox, leishmaniasis, trypanosomiasis, blackleg, spirochaetosis avaria, bacteriophage, scorpion anti-venin, haematology, and classification of zoological specimens in Brazil. Among the early important scientific studies are those of Fontes on the tubercle bacillus, Vianna's discovery of a treatment for cutaneous leishmaniasis, Aragão's investigations on blood parasites, and the work of Cruz, Lutz, Neiva and Travassos on medical zoology and experimental medicine.

On the death of Oswaldo Cruz in 1917, Carlos Chagas became Director of the Institute, which continued the notable progress it had begun under Cruz. Chagas died in November, 1934, and was succeeded by Dr. A. Cardoso Fontes, the present Director, one of Cruz' early associates, noted for his studies on tuberculosis.

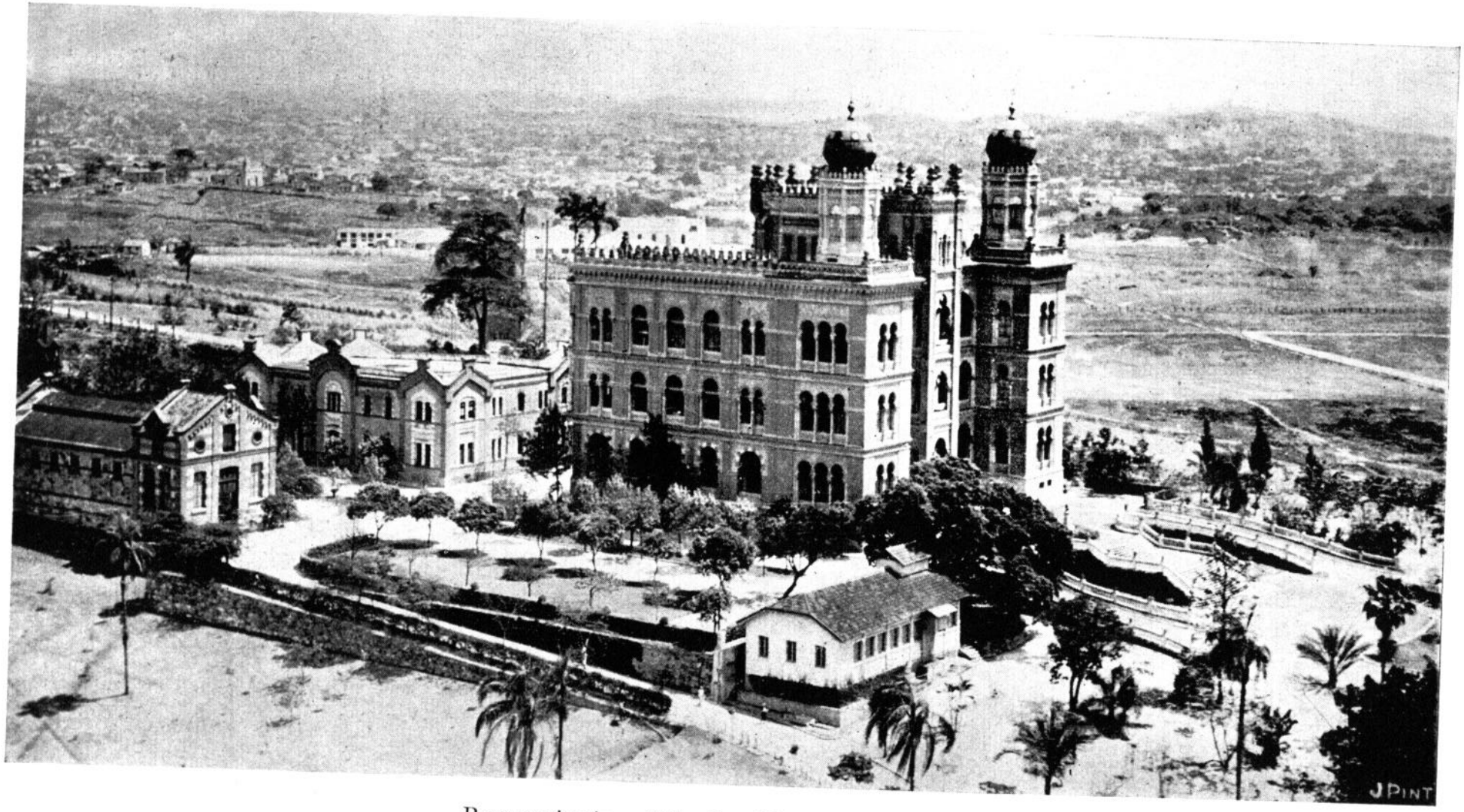
The staff includes, in addition to the Director, a secretary, 10 chiefs of Services, 14 assistants, and 18 sub-assistants. The annual budget amounts to 4.567:000$000 ($228,350).

The Oswaldo Cruz Institute has taken part in several scientific exhibitions and congresses, including those in Berlin, 1907; Dresden, 1911; Rome, 1912; Strasbourg, 1923; New York, 1935; and Washington, 1940.

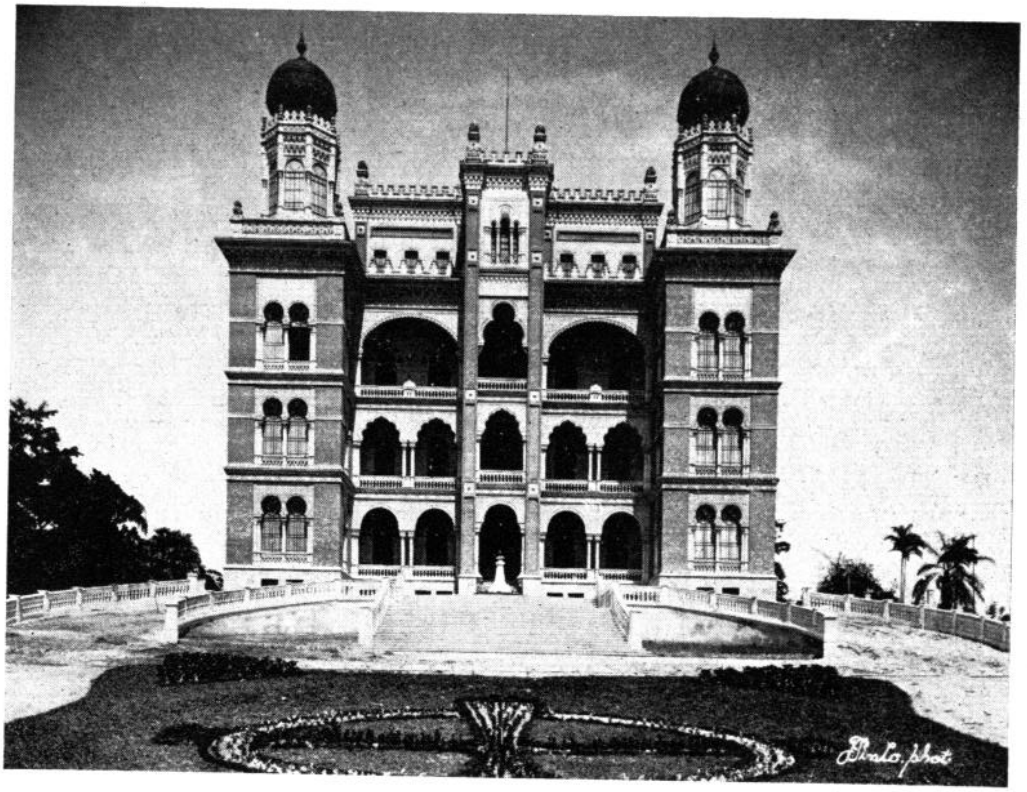




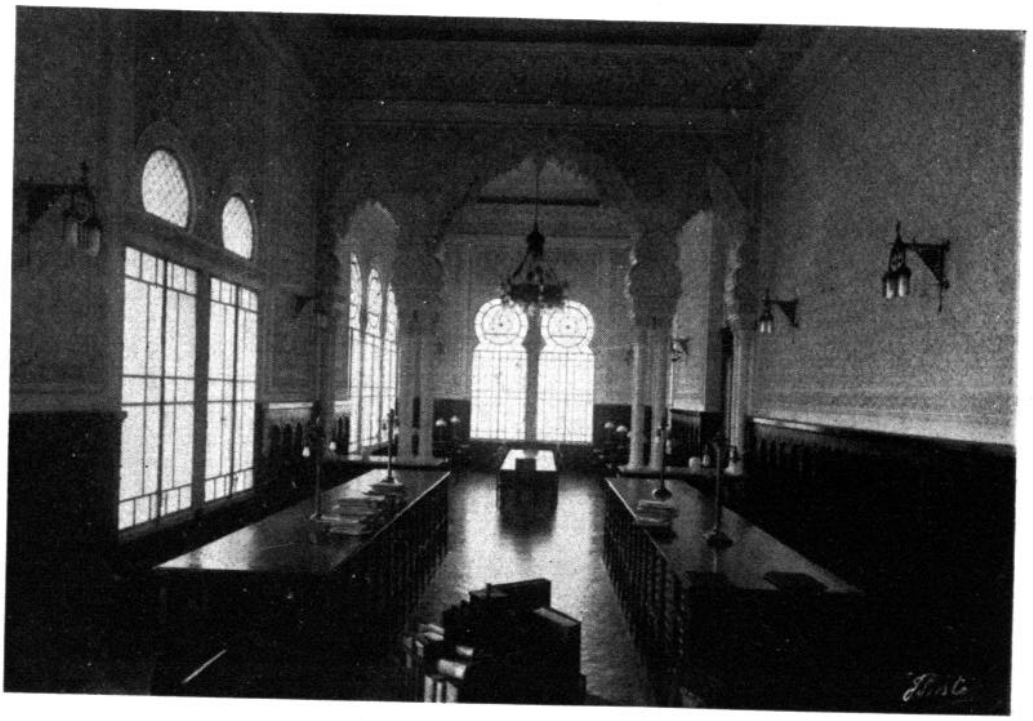
Directors of the Oswaldo Cruz Institute: Top, Dr. Oswaldo Cruz, founder of the Institute; bottom: left, Dr. Carlos Chagas, successor to the first Director; right, Dr. Cardoso Fontes, the present Director.



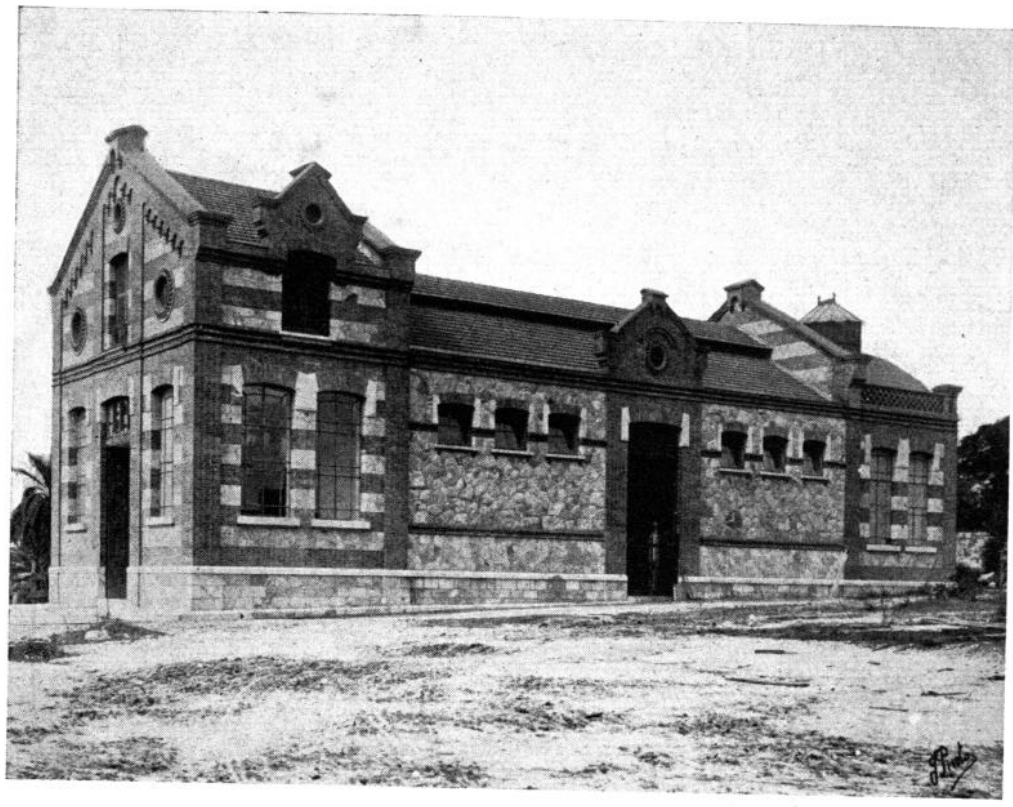
Panoramic view of the Oswaldo Cruz Institute



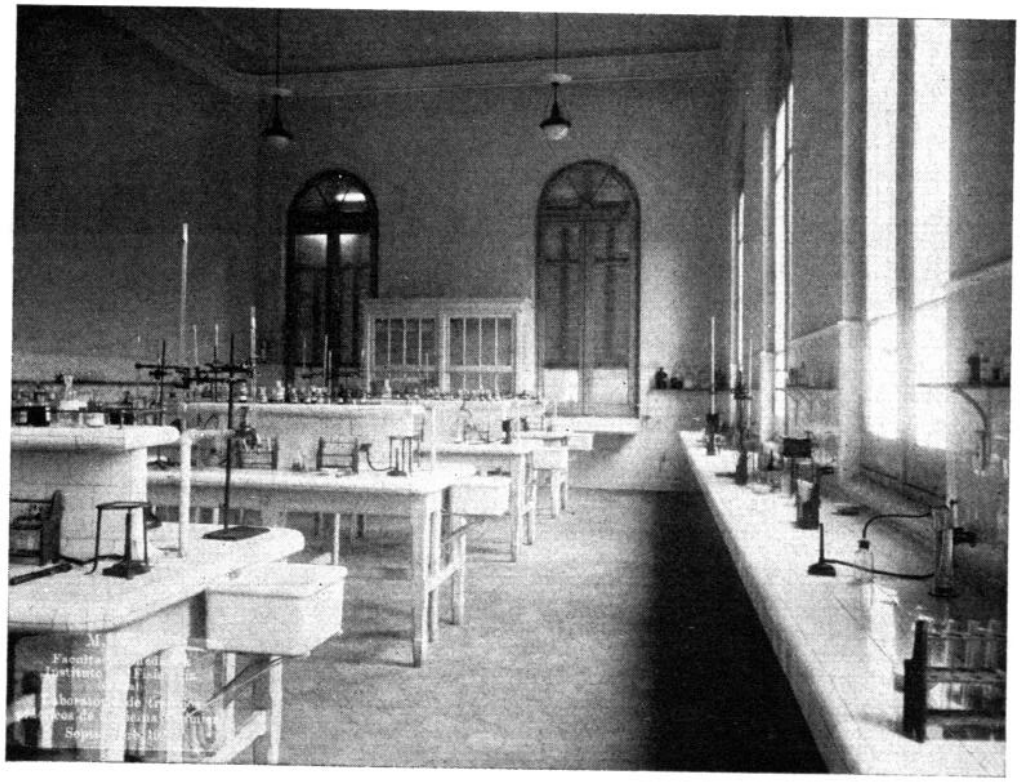
Central Building



Reading room of the library



Pavilion for bleeding and weighing horses



A laboratory