

The Institut Pasteur In French Guiana

Institut Paste









The Institut Pasteur in French Guiana has been in Cayenne since 1940. It is part of the Institut Pasteur international network, which comprises 32 institutes around the world, five of which are located in the Americas.

The Institut Pasteur in French Guiana works in four areas:

d Research

Supporting public health
Teaching and training
Services

A TECHNICAL HUB AT THE CUTTING EDGE OF TECHNOLOGY

Situated on 2 hectares in the heart of Cayenne, the campus of the Institut Pasteur in French Guiana comprises 10 buildings.

The main building houses the management suite and administrative and financial services as well as laboratories for health and the environment, epidemiology, medical biology and virology, with two level-3 biological security laboratories.

The resaerch building historically and because of its surface area of 600 m² on three floors, houses a common molecular biology platform, two level-2 security laboratories for cell culture and two others for extraction and amplification of nucleic acids. It also houses laboratory facilities for parasitology, immunology and virus–host interactions.

The animal facility contains a level-2 security laboratory and a room for breeding mice for antibody production for the diagnosis of arboviruses, such as dengue fever and chikungunya.

The « Vectopole amazonien Emile Abonnenc»

is the most recent building. It is dedicated to medical entomology. The technological showpiece of this 550m² building is a 100-m² level-3 biosecurity laboratory, comprising five rooms and a washing facility. The building is also equipped with an insectarium area and several laboratories (for molecular biology, studying insecticide resistance, taxonomy and systematics).



TARGETED RESEARCH ON VECTORS-BORNE AND EMERGING DISEASES

Research topics are tackled in an integrated manner by complementary multidisciplinary teams including virologists, entomologists, parasitologists, physicians, veterinarians, epidemiologists and others, along three strategic lines.

- A vector approach is used to study arboviruses, to improve diagnosis and care, understand their transmission, dissemination and resistance and strengthen control of these diseases, which are highly endemic in French Guiana. Epidemiology and tele-detection are also used.
- The biodiversity of viruses, their reservoirs and their emergence (such as hantaviruses and arenaviruses) or re-emergence (such as lyssaviruses) are studied by genomics, immunology, proteomics and bioinformatics.
- For malaria control in French Guiana and South America, field research is conducted on the mosquito vectors, their transmission cycles, their dynamics and their variation, and molecular studies address the resistance of the vector and the parasite.





SUPPORTING PUBLIC HEALTH IN THE GUIANA SHIELD AND THE WEST INDIES

The Institut Pasteur in French Guiana hosts several national reference centres for infectious diseases and resistance to antimicrobial agents. These laboratories (for arboviruses, Influenza viruses, hantaviruses and malaria parasites), given 5-year mandates by the French Ministry of Health, contribute to epidemiological monitoring and provide expertise and advice to the French West Indian and French Guianan public health authorities. The national reference for resistance to antimalarial drugs is also a World Health Organization collaborating centre.

The national reference centres of the Institut Pasteur in French Guiana laboratories are recognized in neighbouring countries and the West Indies for their competence in the diagnosis of chikungunya, dengue, influenza and malaria.





REFERENCE LABORATORIES

The medical biology laboratory is used for special analyses, including the diagnosis of tuberculosis and HIV-1 genotyping for resistance to antiretroviral drugs, in samples sent from hospitals, mother-and-child centres and other laboratories in the area.

The environment and health laboratory is a reference laboratory particularly for water analysis. It is authorized by the European Space Agency, the United States National Aeronautics and Space Administration and the Russian Space Agency to detect possible pre-launch microbial contamination of satellites. It monitors the quality of water for the European space station.



• THE PASTEUR TEACHING AND TRAINING ETHIC

Scientists at the Institut Pasteur in French Guiana conduct teaching at regional universities (University of French Guiana, University of the French West Indies) and internationally (virology lectures supported by the AmSud-Pasteur programme in Brazil). In addition, students and trainees from throughout the world are trained each year up to doctoral and post-doctoral levels.

The Institut Pasteur in French Guiana also conducts regular scientific seminars to communicate their results and to interact with the regional and international scientific community.











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in French Guiana

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