Established in 1898 and governed by the 1961 and activities extend to Madagascar and countries around the Indian Ocean.

Led by Professor Christophe Rogier since 2011.

9 Centres & reference laboratories:

- WHO Collaborating Centre for the plague;
- National Centre (CNR) for the WHO Influenza Reference;
- NRL WHO for polio;
- National Reference Laboratory (NRL) and Arbovirus hemorrhagic fever virus responsible;
- CNR for Vibrio cholerae, Salmonella and Shigella;
- NRL mycobacteria;
- NRL water analysis in food industry and control of animal foodstuffs or animal;
- NRL for rabies;
- Central Laboratory of bilharzia.

RESEARCH UNITS

1- EXPERIMENTAL BACTERIOLOGY UNIT-Dr. Jean-Marc COLLARD, Head of Unit

Research on the resistance of bacteria to antibiotics and their mechanisms, and on the diagnosis and molecular epidemiology of environmental bacteria and neglected disease agents such as leptospirosis and melioidosis.

1. Emergence of antibiotic resistance in hospitals and community sector with a focus on Enterobacteriaceae expressing beta-lactamase extended spectrum and the mother - child transmission.
2. the development of rapid diagnostic technology based on LAMP
3. the effect of malnutrition and the Pediatric Environmental enteropathy (EEP) on the composition of the microbiota

International Collaborations

- Pasteur Institute in Paris
- Pharmacology Unit and Infectious Diseases
- Molecular Microbial Pathogenesis Unit
- Platform Genotyping of Pathogens and Public Health
- Cell Biological Emergency Intervention (CIBU)

✓ International course of medical bacteriology, which was held from November 17 to 28, 2014 at the Institute Pasteur de Madagascar (IPM), in Antananarivo.
Projects:

1. Study of genetic environments gram negative bacteria isolated resistance genes Madagascar
2. Children Antibiotic Resistance in Low-Income countries (Charli)
   - International collaborations: Pasteur Institute in Paris, Pasteur Institute of Dakar Pasteur Institute in Cambodia.
3. Transmission dynamics of multi-resistant bacteria (BMR) in neonatology
   - International collaborations: Dr. L. Opatowski, Institut Pasteur in Paris.
4. Role of intestinal carriage in the global emergence of multidrug resistant and hypervirulent Klebsiella pneumoniae clones of a population biology approach
   - Collaborations: Pasteur Institutes in Paris and from Madagascar, Cambodia, Senegal and New Caledonia.
5. Rapid diagnostic test (LAMP) for the detection of antibiotic resistance

2- MEDICAL ENTOMOLOGY UNIT - Dr. Sebastien Boyer, head of the unit: seboyer@pasteur.mg

- identification of potential vectors involved in malaria transmission, potential vectors of arboviruses and followed for a better understanding of arboviral disease outbreaks (Fever Rift Valley - RVF, West Nile virus infections),
- Role of fleas in the plague epidemics,
- Risk assessment dissemination of vector-borne diseases and the study of the interactions between their different actors in their environment to better understand the epidemiology.
- Surveillance of vectors of arboviruses (RVF infections and chikungunya), malaria and plague,
- Evaluation of the sensitivity / vector resistance to insecticides used in control programs.

3- EPIDEMIOLOGY UNIT - Dr. Patrice Piola, head of the unit: ppiola@pasteur.mg

- Conduct of clinical studies on writing study protocols to the data analysis and publication of results, on spatiotemporal modeling using Geographic Information Systems (GIS) applied to health, the socio-anthropological analysis of health behavior and practices, and demographic surveillance in a public observatory in the district of Moramanga.
- Epidemiological surveillance including animation sentinel surveillance network for epidemic-prone diseases and participation in outbreak investigations.

4- UNIT OF IMMUNOLOGY OF INFECTIOUS DISEASES - Dr. Ines-Womas Vigan, Head of Unit: ines@pasteur.mg

- New rapid diagnostic tests development (TDR) especially for cysticercosis.
- The studies on the relationship between abnormal hemoglobins
- Antimalarial resistance
- Aspects of environmental pollution in partnership with the laboratory of food hygiene and environment (LHAE) of IPM
- Studies on leptospirosis were also developed in animals
- R & D project is underway for the development of a rapid test in collaboration with CNR of Paris.
5- UNIT HELMINTHS - Dr. Fabienne Rasoamanamihaja, Head of Unit: fabienne@pasteur.mg

- Epidemiological investigations to know the situation of schistosomiasis and STH
- Monitoring and evaluation of the mass distribution of drugs against these parasites as part of the integrated approach in the fight against Neglected Tropical Diseases,
- Training of medical school students and science.

6- RESEARCH UNITS ON MALARIA

- Advise the Ministry of Public Health on the effectiveness of control tools recommended by the national policy against malaria and malaria endemicity in Madagascar.
- The research topics focuses on malaria drugs, their effectiveness and laboratory diagnosis of malaria in the broad sense.

7- UNIT MYCOBACTERIA - Dr. Voahangy Rasolofo, Head of Unit: vrasolof@pasteur.mg

- Performs the diagnosis of tuberculosis reference for Clinical Biology Center (CBC) National Program against Tuberculosis.
- It also has the TB drug resistance surveillance activities for the NTP.
- Performs implementation and evaluation of new tools for the diagnosis of tuberculosis and resistance.

8- UNIT PLAGUE - Dr. Minoarisoa Rajerison, Head of Unit: mino@pasteur.mg

- Central Plague Laboratory (LCP) of the Ministry of Public Health and production unit of rapid diagnostic tests of the plague. The LCP is the referent national laboratory for diagnosis of plague in Madagascar and the African region.
- Understanding the persistence of plague in Madagascar and particularly addresses the genetics of the immune response of rodent reservoirs of disease, genetic features of the pathogen, the determination of risk factors and modeling of transmission.
- The development of new diagnostic tools.
- Consultancies (Peru, DRC and Tanzania).

9- VIROLOGY UNIT - Dr. Jean-Michel Heraud, Head of Unit: jmheraud@pasteur.mg

- National Reference Laboratory (NRL) for the WHO polio and measles, WHO National Reference Centre for the Flu (CNRG), the NRL for rabies and the NRL for arboviruses and hemorrhagic fever viruses, Involved in monitoring, research and training.
- Surveillance of acute \textit{flaccid paralysis} and polio in Madagascar
- Measles surveillance in Madagascar
- Surveillance of influenza and respiratory infections in Madagascar
- Study of the etiologies of acute respiratory infections in hospital
- Surveillance of \textit{arboviruses} in Madagascar
- Study of zoonoses associated with rodents and \textit{arboviruses} in Madagascar
- Rabies surveillance in Madagascar
- Study of the ecology of hantavirus in Madagascar and the Indian Ocean

\textbf{FOOD LABORATORY HYGIENE AND ENVIRONMENT -} Alexandra Bastaraud, Laboratory Director: abastaraud@pasteur.mg

- Activities focus on \textit{monitoring the health risks} related to food, water and the environment.
- National Reference Center for Salmonella, Shigella and Vibrio cholera.
- First quality control laboratory in Madagascar
- Discover also the \textit{epidemio- Surveillance} Laboratory of shrimp diseases.

\textbf{THE INTERNATIONAL VACCINATION CENTRE}

Center of \textit{vaccination} that provides \textit{consultations} regarding recommended vaccinations Madagascar and required for international travel. It's finally provider in Madagascar products used in allergy.

\textbf{The CIV includes Anti-rabies treatment center (CTAR)} \textit{treat} people exposed to \textit{rabies} and \textit{rabies vaccine} supplies anti all anti-rabies treatment centers in Madagascar, at the expense of IPM.