Missions

1. **Conducting biomedical analysis**, mainly on behalf of CHT G. Bourret and control of food hygiene and environmental partnership with the hospital remains important for epidemiological surveillance, collection of samples and studies clinics.

2. In collaboration with DASS, it fulfills an important public health role in the supervision of locally endemic diseases, emerging and epidemic-risk, necessary in a country that has many exchanges with Australia and Asia. It is also IPNC that is the only laboratory medical entomology. The IPNC participates in Oceania Network Surveillance in Public Health, led by the Secretariat of the Pacific Community.

3. It develops multidisciplinary research applied to local public health problems. They currently focus on leptospirosis, severe pneumonia in children, and dengue.

Public Health

1. **Dengue**

   a. Dengue 4 virus, the man and the mosquito...
      
      i. Monitoring of the disease, involving public health professionals, virologists, entomologists and players in vector control.

   b. Diagnostic strategy for dengue in place at the Pasteur Institute of New Caledonia

   c. Evaluation of a New Anti-Dengue Virus IgM Particle Agglutination Kit in the Context of the Pacific Islands

2. **Influenza**

   a. Surveillance of human influenza in New Caledonia

   b. Laboratory-based influenza surveillance in New Caledonia, 1999-2003

3. **Leptospirosis**
a. **Research Program leptospirosis in New Caledonia**

i. rapid diagnosis
   1. collaboration
      a. Suzanne CHANTEAU, Eric D'Ortenzio and Ann-Claire GOURINAT, **IPNC**
      b. Mathieu PICARDEAU and Pascale BOURHY, **Pasteur Institute of Paris** and Centre National de Reference Leptospira
      c. Farida NATO and Sylvie DARTEVELLE, **Pasteur Institute of Paris**.

ii. **prognostic criteria and decision support clinician**

iii. **MECHANISMS of the disease: the host response and pathogen virulence**

iv. **Natural history of leptospirosis in New Caledonia**

b. **Leptospirosis, diagnosis and monitoring** in New Caledonia

4. **Tuberculosis**

5. **Regional Observatory Pneumococcus**

   a. Becomes **Regional Pneumococcal Observatory** from January 2007 under the aegis of the National Centre for Pneumococcus Reference.

   b. To fulfill its mission, the PRO-NC, organizes regular collection of relevant clinical and bacteriological data. It helps in getting regular and reliable data on pneumococcal resistance to antibiotics of medical interest and pneumococcal infections of New Caledonia.

   c. The ORP-NC aims to make a synthesis of the data generated by the corresponding health authorities to inform them on the epidemiology of pneumococcal infections of New Caledonia.

6. **The Acute Rheumatic**

   a. **Prevention, diagnosis and management** of acute rheumatic fever & rheumatic heart disease

   b. Diagnosis and Taking Charge of Articular Rheumatism Acute (AAF) and Rheumatic Heart Disease Chronicles (CRC)

   c. Health and Social Agency of New Caledonia

7. **HIV**

   a. **Testing and laboratory monitoring** of HIV infection in New Caledonia
1. Medical Biology Laboratories

   a. Presentation of Medical Biology Laboratory has three laboratories:
      i. bacteriology, parasitology, mycology,
      ii. Immuno-serology and molecular biology
      iii. Hematology.

   It is the laboratory of Centre Hospitalier Territorial Gaston Bourret Noumea

2. Patient information on secondary use of samples by the Pasteur Institute of New Caledonia

3. Laboratory of Hygiene and Environment

   a. Activities
      i. Analytical services:
         1. Performing microbiological monitoring of water quality
         2. Microbiological analysis of food
         3. Microbiological water analysis
         4. Search for Legionella in hot water systems and in cooling towers
         5. Microbiological analyzes of industrial products
      ii. Audit services, consulting and training
1. Medical entomology - Nicolas Pocquet

   a. Entomological surveillance network


   i. OBJECTIVES

      1. Follow the spatiotemporal evolution in terms of vector density, populations of Aedes aegypti in order to be able to give the epidemic alert.

      2. Check the structure of mosquito populations found in residential areas and thereby verify the absence of newly introduced exotic species.

      3. Assessing the impact of vector control measures (fight against larvae, awareness campaigns, spraying adulticide,) carried out by the community.

      4. Collect biological material for a part in further research on the mode of spread of the disease and also to the achievement of insecticide susceptibility testing.

2. Dengue and ERUs Arboviruses - Leader: Mr. Dupont-Rouzeyrol (PhD, HdR)

   Former molecular epidemiology laboratory was created in January 2013. Its research themes are focused on arboviruses and their vectors: molecular phylogeny, vector competence, genetic diversity of populations of mosquitoes...

   1. Research Programs

      a. Arboviruses: virology and entomology

      b. Molecular phylogeny of the Arbovirus concerning New Caledonia
c. The mosquito *Aedes aegypti*, the vector of dengue and *chikungunya* in the Pacific: **monitoring and acquisition of knowledge for better control** (AeDenPac)

d. Risk of transmission from mother to the *dengue virus* to the child prenatally and during lactation (DENNAT)

e. **Diagnostics, molecular evolution and vector competence** for *Aedes aegypti* of *Zika virus* in Africa, Asia and the Pacific (ZikAe)

f. Evaluation of the usefulness of **non-invasive sampling in the diagnosis of arboviruses** (Arbo-Virtuess)

g. **Arboviruses in the South Pacific Overseas**: towards a better understanding of vectors and epidemiological risk (ArboPac)

h. **Evaluation and implementation of a new ELISA** for the detection of *IgM anti-virus Chikungunya*

3. **UREL - Dr. Cyril Goarant**

**Research Program leptospirosis in New Caledonia**

a. **Research Program leptospirosis in New Caledonia**

   i. **rapid diagnosis**

      1. collaboration

         a. Suzanne CHANTEAU, Eric D'Ortenzio and Ann-Claire GOURINAT, **IPNC**

         b. Mathieu PICARDEAU and Pascale BOURHY, **Pasteur Institute of Paris** and Centre National de Reference Leptospira

         c. Farida NATO and Sylvie DARTEVELLE, **Pasteur Institute of Paris**.

   ii. **prognostic criteria and decision support clinician**

   iii. **MECHANISMS of the disease: the host response and pathogen virulence**

   iv. **Natural history of leptospirosis in New Caledonia**

b. **Leptospirosis, diagnosis and monitoring** in New Caledonia

4. **Research and Expertise in Infectious Disease Epidemiology - Dr. Magali Teurlai**

   a. **Search Unit presentation and Expertise in Infectious Disease Epidemiology**
i. The unit's tasks are:

1. Research activity on infectious or post-infectious posing public health problems in the populations of New Caledonia.
2. Methodological support in epidemiology and biostatistics other units IPNC and other institutions or health professionals.
3. Training in epidemiology in hosting students in Master of epidemiology or public health or medical students or pharmacy.
4. The main research topics of the unit are currently
   a. Infections Streptococcus Group A, rheumatic fever, rheumatic heart disease
   b. Leptospirosis
   c. Arboviruses.

5. Immunity and Inflammation