

# Pneumonia Multi-centric Pilot Study

Coordinated by the Emerging Pathogens Laboratory  
Fondation Mérieux



## Type of activity:

Applied research,  
Technology transfer  
and training

## Regions/ Beneficiary countries :

Brazil, Cambodia,  
China, Haiti, Lebanon,  
Madagascar, Mali,  
Mongolia, Paraguay

## Partners:

Laboratory of  
Respiratory Viruses -  
IOC and FIOCRUZ in  
Brazil

Rodolphe Mérieux  
Laboratory of Faculty  
of Pharmacy in  
Cambodia

Institut of Pathogen  
Biology/Christophe  
Mérieux  
Laboratory/Chinese  
Academy of Medical  
Sciences in China

Rodolphe Mérieux  
Laboratory of  
GHESKIO Center in  
Haiti

Rodolphe Mérieux  
Laboratory of Faculty  
of Pharmacy of Saint  
Joseph University in  
Lebanon

Centre of Infectiology  
Charles Mérieux of  
Antananarivo  
University of  
Madagascar

Centre of Infectiology  
Charles Mérieux in  
Mali

Mongolian Academy  
of Medical Sciences  
Research Institute of  
Health Sciences

## PROJECT DESCRIPTION

The Pneumonia Multi-centric Pilot Study was launched in 2010 in the framework of Fondation Mérieux's applied research activities coordinated by the Laboratory of Emergent Pathogens (LPE) and the GABRIEL\* network. Designed as a prospective multi-centric case-control study, this research project is carried out in 9 country sites belonging to GABRIEL network: Brazil, Cambodia, China, Haiti, Lebanon, Madagascar, Mali, Mongolia, and Paraguay with the collaboration of hospitals and partnerships from local research institutions.

The pilot study follows a harmonized protocol (total sample size: 900 cases and 900 controls of under 5 years old children) that has gone through central and site IRB/IRE approval and is run under good clinical practices (GCP) compliance. A scale-up of the study is planned in a second phase.

The final purpose of this study is to deliver information on pneumonia causative agents (bacteria and/or viral) enabling better case management of the pneumonia sick child. This should result in the reduction of child morbidity and mortality in the given regions and in the potential development of medical preventive approaches.

## STUDY OBJECTIVES

### Principal objective

To identify the viral and bacterial agents associated with severe pneumonia in hospitalized children under five years of age to determine their etiological distribution and involvement in the onset of pneumonia.

### Secondary objectives

- To study the viral/bacterial co-infection and if it constitutes a risk factor in the severity of the disease.
- To establish a correlation between the type of pathogens identified (bacterial or viral) and the biomarkers: C reactive protein (CRP) and Procalcitonin (PCT).
- To identify the serotypes of *Streptococcus pneumoniae* in nasopharyngeal and blood samples.
- To identify and characterize new infectious agents or variants (bacterial or viral) in samples with unknown etiologies.

### Project Activities

- Study baseline, conception and ethical validation
- Technology transfer and training
- Study phases: Study Initiation, Study Implementation and Monitoring and Study Closing
- Data analysis and evaluation
- Publication of results from the Pilot Study and discussion with stakeholders, civil society groups and public health actors.

\* GABRIEL (Global Approach for Biological Research on Infectious Epidemics in Low-income countries) <http://www.gabriel-network.org>

Fig 1. Algorithm for Cases

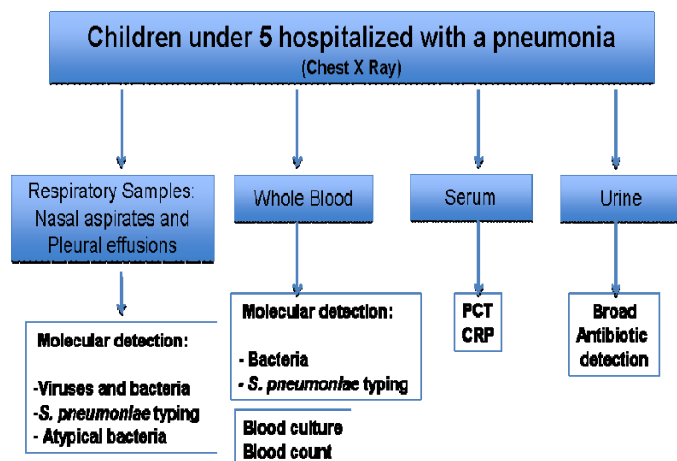


Fig 2. Algorithm for Controls

