

2nd International Congress on Bacteriology & Infectious Diseases

November 17-19, 2014 DoubleTree by Hilton Hotel Chicago-North Shore, USA

Laboratory diagnosis, monitoring and characterization of strains of *Bordetella pertussis* in Brazil

Daniela Leite

Instituto Adolfo Lutz, Brazil

The Instituto Adolfo Lutz (IAL) is the National Reference Center for Pertussis in Brazil since 1988. Traditionally, pertussis laboratory diagnosis has been based solely on culture method, the "gold standard" for detection of *B. pertussis*. The collection of nasopharyngeal secretions is realized from the suspect case definition and confirmation of disease by laboratory criteria, through realization of culture and confirming the diagnosis by biochemical and antigenic identification of samples. The IAL performs the detection of species-specific antigen O1 serotype and fimbrial antigens with Fim2 and Fim3 fundamental in primary characterization of strains. Surveillance and monitoring of bacterial strains that are spread worldwide are realized through the technique of pulsed field gel electrophoresis (PFGE). This technique has been used as a tool for epidemiological surveillance studies of genetic variation in *B. pertussis* strains over time, to identify outbreak-associated isolates and allows identification of strains which are epidemiologically linked. Due to the increase in number of notifications of pertussis observed in Brazil, for over a decade there was a need to implement a diagnostic method with higher sensitivity and specificity, with a shorter time to release results. Although the culture is considered the gold standard for diagnosis, allowing the isolation of the etiologic agent, the method exhibits low sensitivity and is dependent on several factors related to the collection and transportation of the sample. Then, in 2010, we standardized the Real-Time PCR TaqMan (RT-PCR) in routine diagnosis of Instituto Adolfo Lutz. The implementation of this technique has substantially increased the laboratory confirmation promoting an improvement in the diagnosis of pertussis.

Biography

Daniela Leite is a Scientific Researcher since 2004 at the Pertussis Laboratory, Instituto Adolfo Lutz, São Paulo, Brazil. She did her Master degree in Sciences applied to Public Health Laboratorial Studies by the Coordination for Diseases Control - Department of Health of São Paulo, Brazil. She is the Coordinator of the National Reference Laboratory for Pertussis and her research is focused in the diagnostics and molecular epidemiology of the *Bordetella* species.

dedeleite@gmail.com