

Bacterial Diversity of Atlantic Forest Soil

Author(s) Fernanda Santos Freitas¹, Cristiane Carneiro Thompson¹, Fabiano Lopes Thompson², Ana Carolina Paulo Vicente¹

Institution(s) 1. FIOCRUZ, Fundação Oswaldo Cruz, Av. Brasil, 4365, Manguinhos, CEP: 21040-360, Rio de Janeiro, Brasil 2. UFRJ, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brasil

Abstract:

The Atlantic Forest is considered one of the richest biomes in biodiversity of the world and the second more threatened of extinction. At present, less than 10% of the original covering of the Atlantic Forest is preserved. There are more than 30 thousand sorts of plants and animals documented; however, the studies on the microbial diversity of the Atlantic Forest soil are scarce. A collection of the bacteria was created as a consequence of the project of Biodiversity of the Atlantic Forest FINEP/FAPERJ-2005. This project aimed to isolate, to characterize, and to preserve the microbial communities of of this biome. In this was, samples of the representative soils from this biome were collected in the Parque Nacional da Serra dos Órgãos (PARNASO), Rio de Janeiro, Brazil during the winter season in 2007. The collection, at present, comprises 800 isolates corresponding to about 100 morphotypes from five soil types. Enormous progress has been made in prokaryotic systematics over recent years. However, 16S rRNA remains the common currency for studying broad-scale diversity patterns. The identification of isolates was based on 16S rRNA gene sequence (~1300pb), and sequences were compared with sequences in the NCBI database (National Center for Biotechnology Information) and RDP (Ribosomal Database Project). The isolates are preserved at -70°C. Based on this identification we have, so far, identified isolates from the following genera: *Acinetobacter sp.*, *Amycolatopsis sp.*, *Arthrobacter sp.*, *Bacillus sp.*, *Burkholderia sp.*, *Collimonas sp.*, *Cupriavidus sp.*, *Dyella sp.*, *Enterobacter sp.*, *Klebsiella sp.*, *Leifsonia sp.*, *Mycobacterium sp.*, *Paracoccus sp.*, *Paenibacillus sp.*, *Phyllobacterium sp.*, *Pseudomonas sp.*, *Raltonia sp.*, *Serratia sp.*, *Serratia sp.*, *Silvimonas sp.*, *Streptomyces sp.*, and *Variovorax sp.*

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