MICROBIOLOGY AND INFECTIOUS DISEASES

February 22-23, 2018 | Paris, France

Collection of plant growth promoting bacteria from soils of the curitibanos microregion, Santa Catarina, Brazil

Glória Regina Botelho Federal University of Santa Catarina, Brazil

The high diversity of the different Brazilian biomes suggests that the same occurs in the microbiota of their soils. Several Brazilian research institutions conduct research, analysis and storage of the microbiota in different regions of the country. Plant growth promoting bacteria (PGPB) have been of interest because from them it is possible to implement techniques such as the inoculation of nitrogen-fixing bacteria that reduces the use of agricultural inputs. Considering the dimensions and diversity of Brazil, it is necessary that more microbial collections, especially of BPCV be established. The micro-region of Curitibanos received in 2010, one of the campus of the Federal University of Santa Catarina. In 2013, PGPB began to isolated from soils of the region, especially *Pseudomonas, Bacillus* and Rhizobia that formed nodules in beans (*Phaseolus vulgaris*) and bracatinga (*Mimosa scabrella*), a tree native to the coldest regions of southern Brazil. The micro-region of Curitibanos is characterized by different climatic conditions of the other regions of the state and country, suggesting a microbiota adapted to that edafo-climatic conditions. Currently, the PGPB collection has more than 250 isolates. About 50 % have already been identified. About 70% is being tested for the potential stimulus to plant development and protection. The initial results showed that some isolates of *Pseudomonas* and *Bacillus* had production of AIA, phosphate solubilization capacity, control of nematode egg hatching *in vitro*. Some of these stimulated plant development *in planta*. Several isolates of bean and bracatinga were authenticated.

gloria.botelho@ufsc.br