ISOLATION OF ASSOCIATIVE BACTERIA OF *BACCHARIS DRACUNCULIFOLIA* AND ANALYSIS OF ISOLATES BY 16S-RFLP AND REP-PCR FINGERPRINTING TECHNIQUES

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Endophytic microorganisms produce bioactive compounds. However, the biodiversity of those associated with native Brazilian plants is still poorly known. In this study, we investigated the bacterial communities associated with *Baccharis dracunculifolia*, a medicinal plant with antimicrobial properties. Leaf, root and soil samples were collected at Rancho Alegre, Paraná, Brazil. For each sample type, selective treatment was performed (1% chloramine-T for leaves and roots, heating for soil). Samples were homogenized in 0.85% saline, diluted and plated onto different media: BDA, TSA, YCED, ACS, TWYE and YM. After incubation at 28°C for 7 days, colony forming units per gram of fresh weight (CFU/g) were counted and morphologically distinct colonies were peaked and purified. Isolates obtained were grouped by morphotypes and then analyzed by 16S RFLP-PCR with two restriction enzymes (Rsal and EcoRII) and rep-PCR fingerprinting with primers BOX, ERIC and REP. Results shown that medium TSA, YM, BDA considered richer in nutrient, yielded fewer CFUs across all samples and higher number of isolates. In 318 isolates obtained, 42%, 31% and 27% were from rhizosphere, root and leaf, respectively. Results showed a higher reduction of the bacterial population and diversity in roots (1,26x10⁷ to 4,50x10⁶) and leaves (1,73x10⁶ to 5,55x10⁵) after treatment. Comparing the dendrograms from fingerprinting analysis with further sequencing analysis, in RFLP-PCR isolates 184, 229 and 131 formed a group of representatives of the genus *Pantoea* with 80% of similarity and in rep-PCR, this same group was formed with 70% of similarity. Using the latter technique, isolates 180, 395 and 113 formed a group with 40% similarity, corresponding to representatives of the genus *Streptomyces*. In conclusion, medium composition and pH, disinfection, and heat treatment affected the colony count and the number of bacterial isolates from the phyllosphere and rhizosphere in *Baccharis dracunculifolia*. Both fingerprinting techniques showed a diverse microbial community.

Acknowledgements: To Londrina State University by material and infrastructure support and to CAPES, CNPq and Araucaria Foundation by financial support.

Key Words: Endophyte microorganisms; *Baccharis dracunculifolia*; Bacteria diversity.