TITLE: DIVERSITY OF YEASTS ASSOCIATED TO BROMELIADS IN CAATINGA BIOME

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ABSTRACT:

The Caatinga is an exclusively Brazilian biome, which has unique characteristics. In addition, it presents a high diversity of species, being an environment still little explored. The Bromeliaceae family is one of the most predominant vegetation, which form several associations with microorganisms, and stands out lately as a favorable environment for discoveries of new species, mainly yeasts. This group of fungi presents asexual reproduction by budding or fission and are phylogenetically grouped into two phyla: Ascomycota or Basidiomycota. They have cosmopolitan distribution and are present in multiple niches and environments, from humid places to semi-arid ecosystems such as Caatinga. In view of this, the main goal of this work was to study the diversity of yeasts associated with the phylloplane of bromeliads from Caatinga in Alagoas. The study was carried out in two sites: i) Reservation of Private Property – Tocaia, in the municipality of Santana de Ipanema and ii) Serra Caiçara, in Maravilha. Leaves of healthy bromeliads were collected, and the yeasts were isolated in the Laboratory of Molecular Diversity/UFAL, following methodologies established by our group and from the literature. For molecular identification, the genomic DNA extraction was performed, followed by PCR amplification and sequencing of the D1/D2 regions of the 26S gene. The sequences obtained were compared to the GenBank database. It was possible to isolate 191 yeasts, belonging to 82 species and 41 genera, with predominance of basiomycetic yeasts (87%). This results corroborate with the literature, where ascomycetic yeasts are rarer in the phylloplane of bromeliads. The most frequent species in the study were: *Aureobasidium pullulans, Aureobasidium thailandense, Symmetrospora marina, Vishniacozyma* sp.. Among the species richness, 29 are possible new species. Considering this facts, this study demonstrates that bromeliads from Caatinga hosts a high biodiversity of yeasts, besides a high species richness and that are relevant for bioprospecting of microorganisms not described in the literature. Considering that the Caatinga is still an underexploited environment, the substrate has been an important source of yeast isolation.

Keywords: Caatinga alagoana. Taxonomy. Phylloplane.

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