

**TITLE:** Searching for a yeast: Is *Saccharomyces cerevisiae* in tree barks of Brazilian biodiverse Amazonia and Cerrado ecosystems?

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**ABSTRACT:**

We carried out a survey of wild *Saccharomyces* populations in the Brazilian Cerrado and Amazonia using a selective isolation protocol (YNB added with 2% raffinose and 10% ethanol) that allowed successful isolation of *Saccharomyces cerevisiae* from different substrates in subtropical and tropical ecosystems. We collected tree bark of *Tapirira guianensis* from which this species has already been isolated in Cerrado of Tocantins, and various native trees. In total, we analyzed 456 samples, from tree bark of 23 botanical families in seven different riparian forest sites of Cerrado (3), Amazonia (3) and ecotone Cerrado-Amazonia (1). Our questions were 1) Is *Saccharomyces cerevisiae* an inhabitant of Brazilian Amazon and Cerrado Forests? 2) Is there a yeast community occupying this niche (tree barks) in those forests? A diverse guild of yeasts could be isolated from tree barks of 23 tree species that included eight basidiomycetous and 25 ascomycetous species. *Saccharomyces cerevisiae* was not found in tree barks in Amazonia but it could be found in barks of three plants in Cerrado with the highest frequency of occurrence and success rate of 75% in *Jacaranda* sp., 21% in *Callophyllum brasiliense*, and 8% in *Tapirira guianensis*. *Candida鈴木* was the only yeast isolated at all sites whereas *Bandoniozyma noutii*, *Candida blattae*, *Rhodotorula babjevae*, *Torulaspora pretoriensis*, *Tremella auranthia* and *T. mesenterica* were isolated only in the Amazon Forest sites. Eleven species were isolated solely once and seven species were isolated in one site only indicating that host tree and priority effect may determine yeast colonization of tree barks.

**Keywords:** Yeasts, riparian forests, *Jacaranda*, *Callophyllum brasiliense*, *Tapirira guianensis*, *Candida鈴木*

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