

## Letter to the Editor

### Yeasts from Brazilian Biomes - The Reverse of the Coin

Vitorino Modesto dos Santos<sup>1\*</sup>

<sup>1</sup>Armed Forces Hospital and Catholic University of Brasilia, Brasilia-DF, Brazil

**Keywords:** Brazilian Biome; Candida; Yeast Bioproducts.

Dear Editor,

I read the recent research study by Ohara et al. [1] about yeasts bioproducts prospection from Brazilian biomes, including Atlantic Rain Forest, Savannah and transition areas. Diverse yeast isolations were obtained from samples of fruits, flowers and seeds (120), or soil (60), and were further prospected for lipase, biotin and riboflavin production [1]. The strain RPJ1308 was 100% identical to *Candida oleophila* ATCC28137, and produced lipase ( $22.13 \pm 0.49$  U/mL<sup>-1</sup>) as well as biotin ( $11.28 \pm 0.07$  mcg/mL<sup>-1</sup>) [1]. *Candida zeylanoides* NRRLY1774<sup>T</sup> (U45832) was showed in the phylogenetic tree comparing the RPJ1308 strain distance, adopting *Candida natalensis* as outgroup [1]. The authors emphasized the commercial role of lipase and B vitamins production by filamentous fungi and yeasts, and their high temperature stability and unlimited supply; moreover, they highlighted the biotechnical processes with low cost applications [1]. Brazilian Biomes were favorable for isolation of more than 1000 fungal strains potentially producers of diverse bioproducts, including antimicrobials, enzymes, and vitamins; findings confirming the valuable contribution of the commented research [1]. Interestingly, Wang and Wei [2] reported that *C. oleophila* might be a useful method of controlling apple wound contaminated by *Escherichia coli* O157 at room temperature. *E. coli* is a well-known infective agent of human food borne outbreaks characteristically requiring low infectious doses for the development of very ominous infections [2]. Worthy of note, wounded fruits may be infected by fungi, including *C. oleophila*, and the inhibition of enterobacteria by fungi in storage systems has been evaluated [2]. Therefore, reducing population of *E. coli* by *C. oleophila* may become a useful tool [2]. I would like to add some findings described in a 38-year-old Brazilian woman with neutropenia due to chemotherapy for acute myeloid leukemia, who had disseminated mucormycosis successfully controlled by L-AmB

associated with deferasirox and hyperbaric oxygen [3]. Blood cultures were positive for *C. zeylanoides*, and isolates cultured on Sabouraud-dextrose-agar were seeded and incubated for selective yeast identification, showing blue-green colonies on the CHROM-agar culture medium [3]. The infection by *C. zeylanoides* occurred in Brazilian Central plateau, with Savannah environment. The commented articles seem to evidence both positive and adverse consequences related to exuberant richness of fungal populations in Brazilian Biomes.

#### References

1. Ohara A, da Silva EB, Barbosa PPM, de Angelis DA, Macedo GA (2016) Yeasts bioproducts prospection from different Brazilian biomes BAOJ Microbiol 2: 008.
2. Wang Y, Wei A, Li H (2012) Using *Candida oleophila* as a biocontrol agents to prevent foodborne *Escherichia coli* O157 EHEC infections. Springerplus 1(1): 82.
3. Ribeiro EFO, dos Santos VM, Paixão GTG, Cruz LR, Danilov MZ, et al. (2013) Mucormycosis in a patient with acute myeloid leukemia successfully treated with liposomal amphotericin B associated with deferasirox and hyperbaric oxygen. Mycopathologia 175(3-4): 295-300.

**\*Corresponding author:** Vitorino Modesto dos Santos, Armed Forces Hospital. Estrada do Contorno do Bosque s/n, Cruzeiro Novo, 70658-900, Brasilia-DF, Brazil, Fax: #55-61 32331599, Tel: #55-61 39662103; E-mail: vitorinomodesto@gmail.com

**Sub Date:** April 12, 2016, **Acc Date:** April 16, 2016, **Pub Date:** April 18, 2016.

**Citation:** Vitorino Modesto dos Santos (2016) Yeasts from Brazilian Biomes - The Reverse of the Coin. BAOJ Microbio 2: 010.

**Copyright:** © 2016 Vitorino Modesto dos Santos. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.