

Variable and dose-dependent response of *Saccharomyces* and non-*Saccharomyces* yeasts toward lignocellulosic hydrolysate inhibitors

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Abstract

Statement of the Problem:

Deepening the understanding of the microbial physiology and particularities of these types of yeasts proves essential for the development of different bioprocesses.

The Biotechnological potential of non-conventional yeasts has been evaluated in different bioprocesses involving the use of biomass as a way to obtain different products such as xylitol and ethanol.

Methodology and Theoretical Orientation:

Non-conventional yeasts of the group non-*Saccharomyces* yeasts isolated from decaying wood and Cerrado Soil samples and identified and cataloged in the Embrapa Agroenergy database through the work of Trinchez et al., (2019) and Soares et al., (2021).

This yeast was selected to assess possible biotechnological potential in relation to tolerance to inhibitory compounds that are formed and/or present in lignocellulosic hydrolysate.

Received Date: 3 May 2022

Accepted Date: 6 May 2022

Published Date: 31 May 2022

Biography

Carlos Emanuel Vieira Flores Soares completed his doctorate in 2020 at the age of 29 from the University of Brasília – Brazil, in Chemical and Biological Technologies (Institutes of Chemistry and Biology joint program). Dr. Soares has experience in Biotechnology and Microbiology research with an emphasis on yeast physiology and characterization, fermentation processes, molecular biology of microorganisms and identification and characterization of microorganisms by MALDI-TOF mass spectrometry, having assisted and conducted research projects during Bachelor and Master Degree studies at the Catholic University of Brasília, Laboratory of Proteomics and Molecular Biology, and during Master Degree and Doctorate studies at Embrapa Agroenergy, Genetic and Biotechnology Laboratory and Embrapa Genetic and Biotechnological Resources, Mass Spectrometry and Nanoparticles Laboratories, all institutions located in Brasília – Brazil. He is an independent researcher and founder of the recently opened company CES Bio Consulting, specializing in biotechnology consultancy services. To date, he has published 2 articles in internationally renowned peer reviewed journals, as well as abstracts in annals of scientific events, participating in international conferences, gaining international prominence by receiving the Travel Award to attend the 14th International Congress of Yeast, event held in Awaji Island, Hyogo - Japan in September 2016. He has worked as an Environmental and Biotechnology Consultant for the law firm RSA Advogados for 2 years, providing research, support and report writing services for clients who need advising in the Environmental and Biotechnology areas.