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I. PUBLICACIONES (2015 – presente)

Publicaciones en revistas indexadas (ISI)

1. **Mussagy, C.**, Remonatto, D., Picheli, FP., Paula, AV., Herculano, RD., Santos-Ebinuma, VC., Farias, RL., Onishi, BSD., Ribeiro, SJL, Pereira, JFB., Pessoa, A. 2022. A look into *Phaffia rhodozyma* biorefinery: From the recovery and fractionation of carotenoids, lipids and proteins to the sustainable manufacturing of biologically active bioplastics. *Bioresource Technology*. 362: 127785. Q1.
2. **Mussagy, C.**, Oshiro, A., Lima, CA., Amantino, CF., Primo, FL., Santos-Ebinuma, VC., Herculano, RD. 2022. Natural fluorescent red colorants produced by *Talaromyces amestolkiae* as promising coloring agents for custom-made latex gloves. Q2.
3. Burd, BS., **Mussagy, C.**, Singulani, JL., Tanaka, JL., Scontri, M., Brasil, G., Brizuela, N., Herculano, RD. 2022. *Galleria mellonella* Larvae as an Alternative to Low-Density Polyethylene and Polystyrene Biodegradation. *Journal of Polymers and the Environment*. Q2.
4. Otaviano, CA., **Mussagy, C.**, Paz-Cedeno, FR., Pereira, JRF., Masarin, F. 2023. Hydrothermal pretreatment of Eucalyptus by-product and refining of xylooligosaccharides from hemicellulosic hydrolysate. 306: 122520. Q1.
5. **Mussagy, C.**, Silva, PGP., Amantino, CF., Burkert, JFM., Primo, FL., Pessoa, A., Santos-Ebinuma, VC. 2022. Production of natural astaxanthin by *Phaffia rhodozyma* and its potential application in textile dyeing. *Biochemical Engineering Journal*. 187:108658. Q2.
6. **Mussagy, C.**, Ribeiro, HF., Santos-Ebinuma, VC., Schuur, B., Pereira, JFB.

2022. *Rhodotorula* sp.– based biorefinery: a source of valuable biomolecules. *Applied Microbiology and Biotechnology*. 106: 7431-7447. Q1.
7. Aires-Fernandes, M., Costa, RM., do Amaral SR., **Mussagy, C.**, Santos-Ebinuma, VC., Primo, FL. 2022. Development of Biotechnological Photosensitizers for Photodynamic Therapy: Cancer Research and Treatment—From Benchtop to Clinical Practice. *Molecules* 27:6848. Q2.
 8. **Mussagy, C.**, Kurnia, A., Dias, A., Raghavan, V., Santos, V., Pessoa, A. 2022. An eco-friendly approach for the recovery of astaxanthin and β -carotene from *Phaffia rhodozyma* biomass using bio- based solvents. *Bioresource Technology* 345:126555. Q1.
 9. Canaan, M., Brasil, S., De Barros, R., **Mussagy, C.**, Guerra, B., Herculano, D. 2022. Soybean processing wastes and their potential in the generation of high value-added products. *Food Chemistry* 373:131476. Q1.
 10. **Mussagy, C.**, Santos, V., Herculano, D., Coutinho, A., Pereira, F., Pessoa, A. 2022. Ionic liquids or eutectic solvents? Identifying the best solvents for the extraction of astaxanthin and β -carotene from *Phaffia rhodozyma* yeast and preparation of biodegradable films. *Green Chemistry* 24, 118-123. Q1.
 11. **Mussagy, C.**, Farias, F., Bila, M., Giannini, M., Pereira, J., Santo, V., Pessoa, A. 2022. Recovery of β -carotene and astaxanthin from *Phaffia rhodozyma* biomass using aqueous solutions of cholinium- based ionic liquids. *Separation and Purification Technology* 290:120852. Q1.
 12. **Mussagy, C.**, Gonzalez, M., Santos, V., Pereira, J. 2022. Microbial torularhodin - a comprehensive review. *Critical Reviews in Biotechnology* 1-15. Q1.
 13. **Mussagy, C.**, Pereira, J., Santos, V., Pessoa, A., Raghavan, V. 2022. Insights into using green and unconventional technologies to recover natural astaxanthin from microbial biomass. *Critical Reviews in Food Science and Nutrition* 1-15. Q1.
 14. Borges, A., **Mussagy, C.**, Nayrim, B., Menegatti, C., Herculano, D. 2022. Metronidazole-loaded gold nanoparticles in natural rubber latex as a potential wound dressing. *International Journal of Biological Macromolecules* 211, 568-579. Q1.

15. Vieira, R., **Mussagy, C.**, Pereira, E., De Souza, C. 2022. Cellulose Nanoparticles Prepared by Ionic Liquid-Assisted Method Improve the Properties of Bionanocomposite Films. *Journal of Polymers and the Environment* 30, 3174-3185. Q1.
16. Miranda, C., **Mussagy, C.**, Almeida, D. 2022. In vitro and alternative animal models to evaluate the biocompatibility of natural latex-calcium phosphate-based polymer. *Journal of Polymers and the Environment* 30, 3174-3185. Q1.
17. **Mussagy, C.**, Winterburn, J., Santos, V., Pereira, J. 2021. Improvement of carotenoids production from *Rhodotorula glutinis* CCT-2186. *Biochemical Engineering Journal* 165, 107827. Q2.
18. **Mussagy, C.**, Remonatto, D., Santos, V., Coutinho, J., Pereira, J. 2021. Selective recovery and purification of carotenoids and fatty acids from *Rhodotorula glutinis* using mixtures of biosolvents. *Separation and Purification Technology* 266:118548. Q1.
19. **Mussagy, C.**, Khan, S., Kot, A. 2021. Current developments on the application of microbial carotenoids as an alternative to synthetic pigments. *Critical Reviews in Food Science and Nutrition* 1-15. Q1.
20. Kot, A., Kieliszek, M., Piwowarek, K., B'a'ejak, S., **Mussagy, C.** 2021. *Sporobolomyces* and *Sporidiobolus* - non-conventional yeasts for use in industries. *Fungal Biology Reviews* 37, 41-58. Q1.
21. González, M., **Mussagy, C.**, Pereira, J., Fernandez, M., Asenjo, J., Rito, M. 2021. Aqueous two- phase systems in Latin America: Perspective and Future Trends. *Journal of Chemical Technology and Biotechnology*, 97, 1353-1362. Q2.
22. **Mussagy, C.**, Pereira, J., Dufossé, L Raghavan, V., Santos, V., Pessoa, A. 2021. Advances and trends in biotechnological production of natural astaxanthin by *Phaffia rhodozyma* yeast. *Critical Reviews in Food Science and Nutrition* 1-15. Q1.
23. Remonatto, D., Juliana, C., **Mussagy, C.**, De Carvalho, V., Veloso, A. 2021. Utilization of Clay Materials as Support for *Aspergillus japonicus* Lipase: An Eco-Friendly Approach. *Catalysts* 11:1173. Q2.

24. Romeira, K., Abdalla, G., Gonçalves, R., **Mussagy, C.**, Herculano, D. 2021. Residual Starch Packaging Derived from Potato Washing Slurries to Preserve Fruits. *Food and Bioprocess Technology*, 14, 2248-2259. Q1.
25. Marcelino, M., **Mussagy, C.**, De Oliveira, F., Scontri, M., Herculano, D. 2021. Synthesis and characterization of gold nanoparticles and their toxicity in alternative methods to the use of mammals. *Journal of Environmental Chemical Engineering*, 9, 106779. Q1.
26. Veríssimo, N., **Mussagy, C.**, Pessoa, A., Oliveira, R., Pereira, J. 2021. From green to blue economy: Marine biorefineries for a sustainable ocean-based economy. *Green Chemistry* 23, 9377-9400. Q1.
27. **Mussagy, C.**, Tabanez, N., Farias, F., Kurnia, K., Mafra, M., Pereira, J. 2020. Determination, characterization and modeling of aqueous biphasic systems composed of propylammonium-based ionic liquids and phosphate salts. *Chemical Physics Letters*, 754, 137623. Q3.
28. Kurnik, I., **Mussagy, C.**, Pereira, J., Lopes, A. 2020. New insights into determination of binodal curves and phase-separation mechanisms. *Journal of Molecular Liquids*, 318, 114245. Q1.
29. **Mussagy, C.**, Santo, V., Dias, A., Carvalho, P., Coutinho, J., Pereira, J. 2020. Integrative platform for the selective recovery of intracellular carotenoids and lipids from *Rhodotorula glutinis* CCT-2186 yeast using mixtures of bio-based solvents. *Green Chemistry* 22,8478-8494. Q1.
30. **Mussagy, C.**, Winterburn, J., Santos, V., Pereira, J. 2019. Production and extraction of carotenoids produced by microorganisms. *Applied Microbiology and Biotechnology*, 103, 1095-1114. Q1.
31. **Mussagy, C.**, Santos, V., Gonzalez, M., Coutinho, J., Pereira, J. 2019. Protic ionic liquids as cell disrupting agents for the recovery of intracellular carotenoids from yeast *Rhodotorula glutinis* CCT- 2186. *ACS Sustainable Chemistry & Engineering*, 7, 19, 16765–16776. Q1.
32. **Mussagy, C.**, Agbozouhoue, K., Serratos, M. 2018. Biotransformation of the residual liquid from the wet coffee benefit by *Kluyveromyces marxianus*. *African Journal of Biotechnology*, 17, 915-921. Q4.

II. EXPERIENCIA EN PROYECTOS DE INVESTIGACION (2015 – presente)

Proyectos con fondos concursables

2021-2023. **Investigador responsable. FAPESP- BEPE (BRASIL/CANADA) McGill University – University of Sao Paulo 2021/12778-2.** Bioprocess intensification: a non-conventional technology for the extraction of astaxanthin from yeast biomass.

2021-2023. **Investigador responsable. FAPESP- PD (BRASIL) 2020/08655-0.** Desarrollo de una tecnología sostenible y biocompatible para la recuperación y purificación de Astaxantina: un potente antioxidante de valor económico.

2020-2022. **Investigador asociado. FAPERGS - Proyecto de Investigacion - Regular 2019/15493-9.** Desarrollo de hidrogeles electroconductores a base de líquidos iónicos.