

CURRICULUM VITAE

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School: Yale School of Medicine

Education:

02/2002 - 12/2004 Non Degree Program, Colégio Policursos, Technical School in Microcomputer Operator, Mogi das Cruzes, SP
02/2009 - 12/2013 BSc, Federal University of São Carlos, Biotechnology, São Carlos, SP
03/2015 - 04/2019 PhD, University of Campinas, Genetics and Molecular Biology, Bioinformatics, Campinas, SP

Career/Academic Appointments:

08/2009 - 06/2010 President and Founder Member, Federal University of São Carlos (UFSCar)/ CSB Júnior, São Carlos, SP, Brazil
04/2013 - 08/2013 Internship, Facultad de Medicina y Odontología, University of the Basque Country, Bilbao, PV, Spain
09/2013 - 12/2013 Internship, Institute of Biology, University of Campinas, Campinas, SP, Brazil
05/2014 - 07/2014 Laboratory technician, Laboratory, Sustainable development and environmental monitoring, Mogi das Cruzes, SP, Brazil
08/2014 - 02/2015 Internship, Senai Institute of Innovation in Biomass (ISI BIOMASSA), Campinas, SP, Brazil
04/2017 - 12/2017 Bioinformatics Analyst II, Bioinformatics, Brazilian Biorenewables National Laboratory (LNBR)/, Campinas, SP, Brazil
03/2020 - 02/2023 Postdoctoral Associate, Psychiatry, Yale School of Medicine, New Haven, CT

Professional Honors & Recognition:

International/National/Regional

2011 Work Presentation Grant in Free Radicals, ESPCA Scholarship 2011
2012 Science without borders, CPNq
2015 Best poster in Genes and Genomics, X-meeting 2015

2019 Best poster in Bioinformatics session, GBMeeting, UNICAMP
2021 SHARP Training Scholarship Awards for Trainees and Career Development, The SHARP Scholarship Committee

Other

2020 Oral Finalist at the World Congress of Psychiatric Genetics, WCPG

Yale University/Yale School of Medicine/Hospital System

2021 Best Poster at 4th Annual Postdoc Symposium, Yale Postdoc Symposium

Patents:

Pending

1. **Nagamatsu Sheila**, SANTOS, L. V., ALMEIDA, L. D., PIROLLA, R., PEREIRA, G. A. G.. 2016. Genetically modified microorganism with efficient capacity to metabolize pentoses in anaerobiosis, biofuel and/or biochemical production process from plant biomass, biofuel and/or biochemical. Brazil BR1020160180945, filed August 03, 2016. Patent Pending.

Bibliography:

Peer-Reviewed Original Research

1. dos Santos LV, Carazzolle MF, **Nagamatsu ST**, Sampaio NM, Almeida LD, Pirolla RA, Borelli G, Corrêa TL, Argueso JL, Pereira GA. Unraveling the genetic basis of xylose consumption in engineered *Saccharomyces cerevisiae* strains *Scientific Reports* 2016, 6: 38676. [PMID: 28000736](#), [PMCID: PMC5175268](#), [DOI: 10.1038/srep38676](#).
2. Grassi, Carazzolle, Nakagawa, Ferrari, **Nagamatsu**, Santos, Murakami, Pirolla, Pereira. New contributions for industrial n-butanol fermentation: An optimized *Clostridium* strain and the use of xylooligosaccharides as a fermentation additive *Biomass And Bioenergy* 2018, 119: 304-313. [DOI: 10.1016/j.biombioe.2018.09.012](#).
3. Romanello KS, Teixeira KKL, Silva JPMO, **Nagamatsu ST**, Bezerra MAC, Domingos IF, Martins DAP, Araujo AS, Lanaro C, Breyer CA, Ferreira RA, Franco-Penteado C, Costa FF, Malavazi I, Netto LES, de Oliveira MA, Cunha AF. Global analysis of erythroid cells redox status reveals the involvement of Prdx1 and Prdx2 in the severity of beta thalassemia *PLOS ONE* 2018, 13: e0208316. [PMID: 30521599](#), [PMCID: PMC6283586](#), [DOI: 10.1371/journal.pone.0208316](#).
4. de Carvalho, Borelli, Camargo, de Assis, de Ferraz, Fiamenghi, José, Mofatto, **Nagamatsu**, Persinoti, Silva, Vasconcelos, Pereira, Carazzolle. Bioinformatics applied to biotechnology: A review towards bioenergy research *Biomass And Bioenergy* 2019, 123: 195-224. [DOI: 10.1016/j.biombioe.2019.02.016](#).
5. Maldonado MBC, de Rezende Neto NB, **Nagamatsu ST**, Carazzolle MF, Hoff JL, Whitacre LK, Schnabel RD, Behura SK, McKay SD, Taylor JF, Lopes FL. Identification of bovine CpG SNPs as potential targets for epigenetic regulation via DNA methylation *PLOS ONE* 2019, 14: e0222329. [PMID: 31513639](#), [PMCID: PMC6742455](#), [DOI: 10.1371/journal.pone.0222329](#).

6. Matias FI, Meireles, **Nagamatsu ST**, Barrios, do Valle, Carazzolle MF, Fritsche-Neto, Endelman JB. Expected Genotype Quality and Diploidized Marker Data from Genotyping-by-Sequencing of *Urochloa* spp. Tetraploids The Plant Genome 2019, 12: 1-9. [PMID: 33016594](#), [DOI: 10.3835/plantgenome2019.01.0002](#).
7. **Nagamatsu**, Carvalho, Mofatto, Silva, Carazzolle, Pereira. PIPELINE DE EXPRESSÃO DIFERENCIAL EM R APLICADO À *Arabidopsis thaliana* 2020, 122-137. [DOI: 10.22533/at.ed.35520090311](#).
8. Silva, Mofatto, Rebouças, Carvalho, **Nagamatsu**, Carazzolle, Lepikson Neto, Pereira. INFLUÊNCIA DA SUPLEMENTAÇÃO POR FLAVONOIDE NO CRESCIMENTO DE CLONES COMERCIAIS DE *E. urophylla* E *E. urograndis* 2020, 150-165. [DOI: 10.22533/at.ed.35520090313](#).
9. **Nagamatsu ST**, Coutouné N, José J, Fiamenghi MB, Pereira GAG, Oliveira JVC, Carazzolle MF. Ethanol production process driving changes on industrial strains. FEMS Yeast Research 2021, 21 [PMID: 33417685](#), [DOI: 10.1093/femsyr/foaa071](#).
10. Montalvo-Ortiz, **Nagamatsu**, Cheng, Kranzler, Gelernter. Differential Methylation and Co-Methylation Analysis Reveals Functional Targets of Major Depressive Disorder in Women Biological Psychiatry 2021, 89: s382. [DOI: 10.1016/j.biopsych.2021.02.949](#).
11. **Nagamatsu**, Costa, dos Santos, de Carvalho, Fonseca Júnior, da Silva, de Jesus, Aburjaile, García, Pereira, Câmara, Neves, Coelho, Horácio. Liga Brasileira de Bioinformática: Desafios para estimular a formação de estudantes de Bioinformática e Biologia Computacional 2021 [DOI: 10.51780/978-6-599-275326-18](#).
12. Barcelona V, Montalvo-Ortiz JL, Wright ML, **Nagamatsu ST**, Dreisbach C, Crusto CA, Sun YV, Taylor JY. DNA methylation changes in African American women with a history of preterm birth from the InterGEN study BMC Genomic Data 2021, 22: 30. [PMID: 34482817](#), [PMCID: PMC8418749](#), [DOI: 10.1186/s12863-021-00988-x](#).
13. Rompala, **Nagamatsu**, Hurd, Krystal, Gelernter, Group, Montalvo-Ortiz. 14. PROFILING NEUROEPIGENOMIC NETWORKS OF OPIOID USE DISORDER IN HUMAN ORBITOFRONTAL CORTEX European Neuropsychopharmacology 2021, 51: e47-e48. [DOI: 10.1016/j.euroneuro.2021.07.106](#).
14. Yanagui K, Camargo ELO, Abreu LGF, **Nagamatsu ST**, Fiamenghi MB, Silva NV, Carazzolle MF, Nascimento LC, Franco SF, Bressiani JA, Mieczkowski PA, Grassi MCB, Pereira GAG. Internode elongation in energy cane shows remarkable clues on lignocellulosic biomass biosynthesis in *Saccharum* hybrids Gene 2022, 828: 146476. [PMID: 35413393](#), [DOI: 10.1016/j.gene.2022.146476](#).
15. Bender FR, **Nagamatsu ST**, Delamuta JRM, Ribeiro RA, Nogueira MA, Hungria M. Genetic variation in symbiotic islands of natural variant strains of soybean *Bradyrhizobium japonicum* and *Bradyrhizobium diazoefficiens* differing in competitiveness and in the efficiency of nitrogen fixation Microbial Genomics 2022, 8: 000795. [PMID: 35438622](#), [PMCID: PMC9453064](#), [DOI: 10.1099/mgen.0.000795](#).
16. Nunez-Rios, Rompala, Hurd, **Nagamatsu**, Martinez-Magaña, Krystal, Gelernter, Montalvo-Ortiz. P630. Multiomics Mapping of Posttraumatic Stress Disorder in Human Cortical Neurons Biological Psychiatry 2022, 91: s344. [DOI: 10.1016/j.biopsych.2022.02.867](#).
17. **Nagamatsu**, Pietrzak, Na, Krystal, Gelernter, Montalvo-Ortiz. P79. Are Positive Psychosocial Traits Linked to Epigenetic Aging? Results From a National Sample of U.S. Military Veterans Biological Psychiatry 2022, 91: s119. [DOI: 10.1016/j.biopsych.2022.02.313](#).
18. Núñez-Rios DL, Martínez-Magaña JJ, **Nagamatsu ST**, Andrade-Brito DE, Forero DA, Orozco-Castaño CA, Montalvo-Ortiz JL. Central and Peripheral Immune Dysregulation in Posttraumatic Stress

- Disorder: Convergent Multi-Omics Evidence *Biomedicines* 2022, 10: 1107. [PMID: 35625844](#), [PMCID: PMC9138536](#), [DOI: 10.3390/biomedicines10051107](#).
19. de Mello FDSB, Maneira C, Suarez FUL, **Nagamatsu S**, Vargas B, Vieira C, Secches T, Coradini ALV, Silvello MAC, Goldbeck R, Pereira GAG, Teixeira GS. Rational engineering of industrial *S. cerevisiae*: towards xylitol production from sugarcane straw *Journal Of Genetic Engineering And Biotechnology* 2022, 20: 80. [PMID: 35612634](#), [PMCID: PMC9133290](#), [DOI: 10.1186/s43141-022-00359-8](#).
 20. Na PJ, Montalvo-Ortiz JL, **Nagamatsu ST**, Southwick SM, Krystal JH, Gelernter J, Pietrzak RH. Association of Symptoms of Posttraumatic Stress Disorder and GrimAge, an Epigenetic Marker of Mortality Risk, in US Military Veterans. *The Journal Of Clinical Psychiatry* 2022, 83 [PMID: 35802930](#), [DOI: 10.4088/jcp.21br14309](#).
 21. Scarini, **Nagamatsu**, Mofatto, Maioral, Carazzolle, Altemani, Mariano. TP53 MUTATIONS IN THE TRANSITION OF PLEOMORPHIC ADENOMA TO CARCINOMA EX PLEOMORPHIC ADENOMA *Oral Surgery Oral Medicine Oral Pathology And Oral Radiology* 2022, 134: e215. [DOI: 10.1016/j.oooo.2022.01.675](#).
 22. Tamman AJF, **Nagamatsu S**, Krystal JH, Gelernter J, Montalvo-Ortiz JL, Pietrzak RH. Psychosocial factors associated with accelerated GrimAge in male U.S. military veterans *American Journal Of Geriatric Psychiatry* 2022 [PMID: 36210262](#), [DOI: 10.1016/j.jagp.2022.09.002](#).
 23. Nunez, Rompala, Hurd, **Nagamatsu**, Martínez-Magaña, Krystal, Gelernter, Group, Montalvo-Ortiz. T69. CPG AND NON-CPG EPIGENOMIC MAPPING IN HUMAN CORTICAL NEURONS REVEALS HYDROXYMETHYLATION AS AN IMPORTANT GENE REGULATORY MECHANISM IN PTSD *European Neuropsychopharmacology* 2022, 63: e205-e206. [DOI: 10.1016/j.euroneuro.2022.07.369](#).
 24. **Nagamatsu**, Rompala, Hurd, Nunez, Group, Montalvo-Ortiz. NON-CPG METHYLOME ANALYSIS IN HUMAN CORTICAL NEURONS IDENTIFIES NOVEL GENE PATHWAYS AND DRUG TARGETS FOR OPIOID USE DISORDER *European Neuropsychopharmacology* 2022, 63: e273. [DOI: 10.1016/j.euroneuro.2022.07.486](#).

Peer-Reviewed Reviews, Practice Guidelines, Standards, and Consensus Statements

1. da Cunha MC, dos Santos Aguilar JG, de Melo RR, **Nagamatsu ST**, Ali F, de Castro RJS, Sato HH. Fungal L-asparaginase: Strategies for production and food applications *Food Research International* 2019, 126: 108658. [PMID: 31732030](#), [DOI: 10.1016/j.foodres.2019.108658](#).

Peer-Reviewed Case Reports and Technical Notes

1. **Nagamatsu ST**, Teixeira GS, de Mello FDSB, Tizei PAG, Nakagawa BTG, de Carvalho LM, Pereira GAG, Carazzolle MF. Genome Assembly of a Highly Aldehyde-Resistant *Saccharomyces cerevisiae* SA1-Derived Industrial Strain *Microbiology Resource Announcements* 2019, 8: e00071-19. [PMID: 30923240](#), [PMCID: PMC6439243](#), [DOI: 10.1128/mra.00071-19](#).