

Stanford



Ronaldo da Silva Francisco Jr

Postdoctoral Scholar, Pathology

Bio

BIO

I am a geneticist focused on the application of computational and statistical methods to study genetic mechanisms of disease. My research interests include (i) genomic and precision medicine; (ii) detection and analysis of genetic variants using NGS data (WGS, WES, RNA-Seq); and (iii) transcriptome and allele-specific expression.

PROFESSIONAL EDUCATION

- Master of Science, Unlisted School (2019)
- Bachelor of Science, Unlisted School (2017)
- Doctor of Philosophy, Universidade Federal Rio De Janeiro (2022)
- PhD, Federal University of Rio de Janeiro , Genetics (2022)
- MSc, National Laboratory of Scientific Computing , Computational Modeling (2019)
- BSc, State University of Northern Rio de Janeiro , Biological Sciences (2017)

STANFORD ADVISORS

- Vivek Charu, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Multi-layered transcriptomic analysis reveals a pivotal role of FMR1 and other developmental genes in Alzheimer's disease-associated brain ceRNA network.** *Computers in biology and medicine*
Piergiorgio, R. M., da Silva Francisco Junior, R., de Vasconcelos, A. T., Santos-Rebouças, C. B.
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- **Genetic screening in a Brazilian cohort with inborn errors of immunity** *BMC GENOMIC DATA*
Ferreira, C., Francisco Jr, R., Gerber, A., de Campos Guimaraes, A., Anisio de Carvalho, F., Santos dos Reis, B., Pinto-Mariz, F., de Souza, M., Meira de Vasconcelos, Z., Goudouris, E., Vasconcelos, A.
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- **Assessing whole-exome sequencing data from undiagnosed Brazilian patients to improve the diagnostic yield of inborn errors of immunity.** *BMC genomic data*
Ferreira, C. S., da Silva Francisco Junior, R., Gerber, A. L., Guimaraes, A. P., Amendola, F. A., Pinto-Mariz, F., de Souza, M. S., Miranda, P. C., de Vasconcelos, Z. F., Goudouris, E. S., Vasconcelos, A. T.
2023; 24 (1): 36
- **Differential haplotype expression in class I MHC genes during SARS-CoV-2 infection of human lung cell lines** *FRONTIERS IN IMMUNOLOGY*
Francisco Junior, R., Temerozo, J. R., Ferreira, C., Martins, Y., Souza, T. L., Medina-Acosta, E., Vasconcelos, A.
2023; 13: 1101526

- **Phylogenetic analysis of SARS-CoV-2 spread in Rio de Janeiro, Brazil, highlights how metropolitan areas act as dispersal hubs for new variants** *MICROBIAL GENOMICS*
Lamarca, A., de Almeida, L. P., Francisco, R., Cavalcante, L., Brustolini, O., Gerber, A. L., Guimaraes, A. C., de Oliveira, T., Nascimento, e., Policarpo, C., de Souza, I., de Carvalho, E., Ribeiro, et al
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- **Clinical and genetic findings in two siblings with X-Linked agammaglobulinemia and bronchiolitis obliterans: a case report** *BMC PEDIATRICS*
Francisco Junior, R., de Moraes, G., de Carvalho, J., Ferreira, C., Gerber, A., Guimaraes, A. C., Amendola, F., Pinto-Mariz, F., Meira de Vasconcelos, Z., Goudouris, E., Ribeiro de Vasconcelos, A.
2022; 22 (1): 181
- **Case-control study to identify key residues and domains within hereditary renal disease gene panel to aid in VUS reclassification**
Vincent, L., Punj, S., Sanapareddy, N., Naik, A., Smart, T., Gray, J., Francisco, R., Charu, V., Keen-Kim, J.
ELSEVIER SCIENCE INC.2022: S202
- **Emergence of Within-Host SARS-CoV-2 Recombinant Genome After Coinfection by Gamma and Delta Variants: A Case Report** *FRONTIERS IN PUBLIC HEALTH*
Francisco Junior, R., Almeida, L., Lamarca, A. P., Cavalcante, L., Martins, Y., Gerber, A. L., Guimaraes, A. C., Salviano, R., dos Santos, F., de Oliveira, T., de Souza, I., de Carvalho, E., Ribeiro, et al
2022; 10: 849978
- **Genomic Surveillance Tracks the First Community Outbreak of the SARS-CoV-2 Delta (B.1.617.2) Variant in Brazil** *JOURNAL OF VIROLOGY*
Lamarca, A. P., de Almeida, L. P., Francisco, R., Cavalcante, L., Machado, D., Brustolini, O., Gerber, A. L., Guimaraes, A. C., Policarpo, C., de Oliveira, G., Boullosa, L., de Souza, I., de Carvalho, et al
2022; 96 (2): e0122821
- **Turnover of SARS-CoV-2 Lineages Shaped the Pandemic and Enabled the Emergence of New Variants in the State of Rio de Janeiro, Brazil** *VIRUSES-BASEL*
Francisco Junior, R., Lamarca, A. P., de Almeida, L. P., Cavalcante, L., Machado, D., Martins, Y., Brustolini, O., Gerber, A. L., Guimaraes, A. C., Goncalves, R., Alves, C., Mariani, D., Cruz, et al
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- **Genomic surveillance of SARS-CoV-2 tracks early interstate transmission of P.1 lineage and diversification within P.2 clade in Brazil** *PLOS NEGLECTED TROPICAL DISEASES*
Lamarca, A. P., de Almeida, L. P., Francisco Jr, R., Lima, L., Scortecchi, K., Perez, V., Brustolini, O. J., Sousa, E., Secco, D., Santos, A., Albuquerque, G., Mariano, A., Maciel, et al
2021; 15 (10): e0009835
- **Intra-host evolution during SARS-CoV-2 prolonged infection** *VIRUS EVOLUTION*
Voloach, C. M., Francisco Jr, R., de Almeida, L. P., Brustolini, O. J., Cardoso, C. C., Gerber, A. L., Guimaraes, A. C., Leitao, I., Mariani, D., Ota, V., Lima, C. X., Teixeira, M. M., Dias, et al
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- **Whole-exome sequencing reveals insights into genetic susceptibility to Congenital Zika Syndrome** *PLOS NEGLECTED TROPICAL DISEASES*
Borda, V., da Silva Francisco Junior, R., Carvalho, J. B., Moraes, G. L., Rossi, A., Pezzuto, P., Azevedo, G. S., Chamber-Reis, B. L., Portari, E. A., Melo, A., Moreira, M. L., Guida, L. C., Cunha, et al
2021; 15 (6): e0009507
- **Genomic Characterization of a Novel SARS-CoV-2 Lineage from Rio de Janeiro, Brazil** *JOURNAL OF VIROLOGY*
Voloach, C. M., Francisco Jr, R., de Almeida, L. P., Cardoso, C. C., Brustolini, O. J., Gerber, A. L., Guimaraes, A. C., Mariani, D., da Costa, R., Ferreira Jr, O. C., Cavalcanti, A., Frauches, T., de Mello, et al
2021; 95 (10)
- **Exome-Wide Search for Genes Associated With Central Nervous System Inflammatory Demyelinating Diseases Following CHIKV Infection: The Tip of the Iceberg** *FRONTIERS IN GENETICS*
Alves-Leon, S., Ferreira, C., Herlinger, A., Fontes-Dantas, F., Rueda-Lopes, F., Francisco, R., Goncalves, J., de Araujo, A., Rego, C., Higa, L., Gerber, A., Guimaraes, A., de Menezes, et al
2021; 12: 639364
- **Pervasive transmission of E484K and emergence of VUI-NP13L with evidence of SARS-CoV-2 co-infection events by two different lineages in Rio Grande do Sul, Brazil** *VIRUS RESEARCH*

Jr, R., Benites, L., Lamarca, A. P., Almeida, L., Hansen, A., Gularte, J., Demoliner, M., Gerber, A. L., Guimara, A. C., Antunes, A., Heldt, F., Mallmann, L., Hermann, et al
2021; 296: 198345

● **Evolution and epidemic spread of SARS-CoV-2 in Brazil** *SCIENCE*

Candido, D. S., Claro, I. M., de Jesus, J. G., Souza, W. M., Moreira, F. R., Dellicour, S., Mellan, T. A., du Plessis, L., Pereira, R. M., Sales, F. S., Manuli, E. R., Theze, J., Almeida, et al
2020; 369 (6508): 1255-+

● **Pervasive Inter-Individual Variation in Allele-Specific Expression in Monozygotic Twins** *FRONTIERS IN GENETICS*

Francisco Junior, R., Ferreira, C., Santos e Silva, J., Machado, D., Martins, Y., Ramos, V., Carnivali, G., Garcia, A., Medina-Acosta, E.
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● **Evidence for Clonally Associated Increasing Rates of Azithromycin Resistant *Neisseria gonorrhoeae* in Rio de Janeiro, Brazil** *BIOMED RESEARCH INTERNATIONAL*

Barros dos Santos, K. T., Skaf, L. B., Justo-da-Silva, L. H., Medeiros, R. C., Francisco Junior, R. S., Canine, M. A., Fracalanza, S. L., Bonelli, R. R.
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● **Maternal 5(m)CpG Imprints at the PARD6G-AS1 and GCSAML Differentially Methylated Regions Are Decoupled From Parent-of-Origin Expression Effects in Multiple Human Tissues** *FRONTIERS IN GENETICS*

Machado Araujo, G., da Silva Francisco Junior, R., Ferreira, C., Mozer Rodrigues, P., Machado, D., de Souza, T., de Souza, J., Osorio da Silva, C., Alves da Silva, A., Franco Andrade, C., da Silva, A., Ramos, V., Garcia, et al
2018; 9: 36

● **Trisomy 21 Alters DNA Methylation in Parent-of-Origin-Dependent and -Independent Manners** *PLOS ONE*

Alves da Silva, A., Machado, F., Pavarino, E., Biselli-Perico, J., Zampieri, B., Francisco Junior, R., Mozer Rodrigues, P., Machado, D., Santos-Reboucas, C., Fernandes, M., Chua de Sousa Lopes, S., Lopes Rios, A., Medina-Acosta, et al
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