Giuliano Netto Flores Cruz

Vancouver, BC - Canada
cruz.gnf@gmail.com
https://giulianonetto.netlify.app/

EDUCATION

The University of British Columbia (UBC), *Ph.D. in Statistics (incoming)*
Start date: SEPT 2023 (Vancouver, BC - Canada)
Advisor: Dr. Keegan Korthauer

The University of British Columbia (UBC), *MSc. in Bioinformatics*
SEPT 2021 — AUG 2023 (Vancouver, BC - Canada)
Advisor: Dr. Keegan Korthauer

Federal University of Rio Grande do Sul (UFRGS), *Title of Pharmacist*
FEB 2012 — DEC 2018 (Porto Alegre, RS - Brazil)
Advisors: MSc. Paulo Saraiva & Dr. Alexandre Fuentefria

EXPERIENCE

BC Children's Hospital Research Institute, *Research Assistant*

SEP 2021 — PRESENT (Vancouver, BC - Canada)

- RA at Keegan Korthauer's lab.
- Development of statistical methodology and computational tools for the analysis of high-dimensional genomics data.

BiomeHub, *Statistical Bioinformatician*

SEP 2019 — PRESENT (Florianópolis, SC - Brazil)

- Research: development of statistical models to estimate bacterial colony-forming units (CFU) using next-generation sequencing data.
- Design and analysis of next-generation sequencing experiments and clinical studies.

Neoprospecta, *Statistical Bioinformatician*

JUN 2018 — AUG 2019 (Florianópolis, SC - Brazil)

- Develop, implement and maintain bioinformatics pipelines.
- Microbiome data analysis consultancy for academia and industry.

Immunology Lab (School of Pharmacy – UFRGS), *Research and Teaching Assistant*

JAN 2016 — MAY 2018 (Porto Alegre, RS - Brazil)

- TA: Immunology, Clinical Immunology, and Immunodiagnostics.
- RA: idiopathic pulmonary fibrosis using gene expression data.

Rohwer Lab (San Diego State University), *Research Assistant*

MAY 2015 — AUG 2015 (San Diego, CA - USA)

- Internship as part of the *Science without Borders* program.
- RA: lab protocols for endotoxin-free bacteriophage stock preparation.

SKILLS

* * Superscripts index related publications.

R & Python

- Tidyverse, Bioconductor, brms, rstan
- Django, common Python data science libraries

Bayesian modeling[1, 2]

Machine Learning[3]

Data types and wet lab:

- Microbiome[1,6]
- Cell image[4]
- Gene expression[3]

PostgreSQL, BigQuery

Django REST API & Flask

Google Cloud Platform

Docker

Unix & shell scripting

AWARDS

The University of British Columbia, *Four-year Fellowship (4YF)*

SEP 2023 — AUG 2027 (Vancouver, BC - Canada)

Selected by the Department of Statistics as the 2023 recipient of UBC's premier Ph.D. fellowship.

Concord University, *Science without Borders (CAPES)*

JUL 2014 — AUG 2015 (Athens, WV & San Diego, CA - USA)

Student exchange program sponsored by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), Brazilian Ministry of Education.

COMPLEMENTARY EDUCATION

edX/MITx, *Micromasters in Statistics and Data Science*

MAY 2019 — DEC 2020 (online)

Comprising advanced courses on probability, statistics, machine learning, and data analysis.

SOFTWARE

BayesDCA ([website](#)): R package to perform Bayesian Decision Curve Analysis (manuscript in preparation).

SELECTED PUBLICATIONS

* Indices relate to superscripts from the skills section. See the complete list at [Google Scholar](#).

1) **Cruz GNF** [+], Christoff AP [+], Oliveira LFV. 2021. "Equivolumetric protocol generates library sizes proportional to total microbial load in next-generation sequencing". *Frontiers in Microbiology.* https://doi.org/10.3389/fmicb.2021.638231

2) Christoff AP [+], **Cruz GNF** [+] et al. 2021. "Swab pooling for large-scale RT-qPCR screening of SARS-CoV-2". *Plos One.* https://doi.org/10.1371/journal.pone.0246544

3) Life B, Petkau TL, **Cruz GNF**, Navarro-Delgado EI, Shen N, Korthauer K, Leavitt BR. 2023. "FTD-associated behavioural and transcriptomic abnormalities in 'humanized' progranulin-deficient mice: A novel model for progranulin-associated FTD". *Neurobiology of Disease.* https://doi.org/10.1016/j.nbd.2023.106138

4) Lopes W [+], **Cruz GNF** [+], Rodrigues ML, Vainstein MH, Kmetzsch L, Staats CC, Vainstein MH, Schrank A. 2020. "Scanning electron microscopy and machine learning reveal heterogeneity in capsular morphotypes of the human pathogen Cryptococcus spp.". *Scientific Reports.* https://doi.org/10.1038/s41598-020-59276-w

5) Bonilla N, Rojas MI, **Cruz GNF**, Hung S, Rohwer F, Barr JJ. 2016. "Phage on tap–a quick and efficient protocol for the preparation of bacteriophage laboratory stocks". *PeerJ.* https://doi.org/10.7717/peerj.2261

6) Christoff AP, Sereia AFR, **Cruz GNF**, et al. 2020. "One-year cross-sectional study in adult and neonatal intensive care units reveals the bacterial and antimicrobial resistance genes profiles in patients and hospital surfaces". *Plos One.* https://doi.org/10.1371/journal.pone.0234127