Carlos Fernando Buen Abad Najar

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Department of Medicine
University of Chicago, Chicago, IL

EDUCATION & TRAINING

2021-present **Postdoctoral scholar. University of Chicago.**
Section of Genetic Medicine, Department of Medicine.
Research groups: Dr Yang I Li and Dr Matthew Stephens.

2021 **Ph.D in Computational Biology. University of California, Berkeley.**
Advisors: Dr Liana Lareau, Dr Nir Yosef.

2015 **Bachelor's Degree (Licenciatura) in Biology. National Autonomous University of Mexico.**
Gabino Barreda medal (equivalent to *Summa cum laude*).

RESEARCH PUBLICATIONS

** Indicates equal contribution. ^ indicates co-corresponding author.*

2024 **Buen Abad Najar CF**, Xie D, Carbonetto P, Feng R, Wang G, Stephens M^, Li YI^. Reference-free analysis of mRNA isoform variation in large-scale RNA-seq datasets. *In preparation*.
* Online manuscript:

2024 Fair BJ*, **Buen Abad Najar CF***, Zhao J, Lozano S, Reilly A, Mossian G, Staley JP, Wang J, Li YI. Global impact of aberrant splicing on human gene expression levels. ***Nature Genetics*** 56, 1851-1861.

2022 **Buen Abad Najar CF**, Burra P, Yosef N^, Lareau LF^. Identifying cell-state associated alternative splicing events and their co-regulation. ***Genome Research*** 32, 1385.

2020 **Buen Abad Najar CF**, Yosef N^, Lareau LF^. Coverage-dependent bias creates the appearance of binary splicing in single cells. ***eLife*** (9): e54603.

2015 Vohr S, **Buen Abad Najar CF**, Shapiro B, Green RE. A method for positive forensic identification of samples from extremely low-coverage sequence data. ***BMC Genomics*** 16: 1034.

2015 Sankoff D, Zheng C, Wang B, **Buen Abad Najar CF**. Structural vs. functional mechanisms of duplicate gene loss following whole genome doubling. ***BMC Bioinformatics*** 16 Suppl 17:S9. doi: 10.1186/1471-2105-16-S17-S9.

2013 Chen ECH, **Buen Abad Najar CF**, Zheng C *et al*. The dynamics of functional classes of plant genes in rediploidized ancient polyploids. ***BMC Bioinformatics***. 2013. 14(Suppl 15):S19 DOI: 10.1186/1471-2105-14-S15-S19.

PUBLICLY AVAILABLE SOFTWARE

Psix — A computational tool for identifying cell-state-associated splicing and modules of co-regulation in single cells: https://github.com/lareaulab/psix.

FELLOWSHIPS & SCHOLARSHIPS

2015-2020 UC MEXUS-CONACYT Doctoral Fellowship.

2010-2014 Academic Excellence Scholarship from the National Academy of Sciences in Mexico.

SELECTED ACADEMIC PRESENTATIONS

Invited presentations

2023 Population and Statistical Genetics Seminar Series. New York Genome Center, New York.

2023 Rising Stars in Genetics and Genomics Symposium. University of Utah, Utah.

2019 RNA Club Seminar Series. University of California, Santa Cruz, California.

Scientific conferences (oral presentation)

2023 Genome Informatics, Cold Spring Harbor Laboratory, New York.

2021 26th Annual Meeting of the RNA Society (virtual meeting).

2020 Systems Biology: Global Regulation of Gene Expression, Cold Spring Harbor Laboratory (virtual meeting).

2019 The Bay Area RNA Club, University of California, San Francisco, California.

2019 RNA Informatics, Wellcome Genome Campus Advanced Courses + Scientific Conferences, Hinxton, UK.

2018 Genome Informatics, Wellcome Genome Campus Advanced Courses + Scientific Conferences, Hinxton, UK.

Posters

2024 The GREGoR Consortium Annual Meeting, Massachusetts (poster).

2023 Genome Informatics, Cold Spring Harbor Laboratory, New York.

2022 American Society of Human Genetics Annual Meeting, California (poster).

2018 Systems Biology: Global Regulation of Gene Expression, Cold Spring Harbor Laboratory (poster).

TEACHING

2016-2020 **Center for Computational Biology Python Bootcamp**.
Instructor, organizer and class assistant.

Spring 2019 **Doctoral Seminar in Computational Biology (CMPBIO293)**
Graduate student instructor. Class instructor: Dr Nir Yosef.

Fall 2018 **Algorithms for Computational Biology (CS176)**
Graduate student instructor. Class instructor: Dr Nir Yosef.

MENTORING

2020-2021 Prakruthi Burra, Computational Biology PhD program (Lareau lab).

2019-2020 Helen Sakharova, Computational Biology PhD program (Lareau lab).

LEADERSHIP & OUTREACH

2024 **Leadership and Management in Action Program for postdocs.**
A six-week course in leadership and management offered by the Pritzker School of Molecular Engineering, University of Chicago.

2019 **Be a Scientist (BAS) program at Longfellow Middle School**, Berkeley CA.
Outreach program by the University of California, Berkeley. Mentored 7th-grade Spanish-speaking students to develop science projects for seven weeks.

2016-2018 **Northern California Computational Biology (NCCB) student symposium.** Founding member and organizer of a student-led seminar bringing together students across the Bay Area to network and share their research.

OTHER ACADEMIC SERVICE

Reviewed articles for Cell Reports.