



# Cristian Gonzalez-Colin



Updated August 31, 2023

PhD Student, Bioinformatics and Systems Biology

## CONTACT

 [cris-gonzalezcolin](#)  
 [cgonzalez@lji.org](mailto:cgonzalez@lji.org)

 [cristian2420](#)  
 LJI

 0000-0002-3920-3740  
 [cgonzalezcolin@ucsd.edu](mailto:cgonzalezcolin@ucsd.edu)

 [MeDicenCrix](#)  
 UCSD

## RESEARCH INTEREST

Understanding the effect of genetic variants linked to human diseases in immune-related cell types, through the development of computational tools.

## EDUCATION

**University of California, San Diego**  
PhD in Bioinformatics and Systems Biology  
**Center for Genomic Sciences, UNAM**  
BS in Genomic Sciences

La Jolla, California  
In Progress  
Morelos, Mexico  
2016-2020

- Dissertation: Effects of disease risk-variants in gene expression at single cell level
- Thesis Committee: Pandurangan Vijayanand, MD, PhD; Benjamin Schmiedel, PhD; Yvonne Rosenstein, PhD.
- Global Average: 9.3 out of 10

**Faculty of Sciences, UNAM**  
BS in Biology

Mexico City, Mexico  
2015-2016

## RESEARCH EXPERIENCE

**PhD Student**  
*Vijayanand Lab, La Jolla Institute for Immunology*

2022 – Present  
La Jolla, California

Mentor: Pandurangan Vijayanand, MD, PhD

**La Jolla Institute for Immunology**  
*Research Technician*

2019-2022

*Vijayanand Lab, La Jolla Institute for Immunology*

La Jolla, California

Quantitative Trait Loci (QTLs) for gene expression and histone marks in DICE database.

**International Laboratory for Human Genome Research**  
*Undergraduate Researcher*

2018-2019

*Regulatory Genomics and Bioinformatics Lab*

Queretaro, Mexico

Development of tools for the identification of conserved regulatory regions in Prokaryotes genomes for the RSAT suite tools.

**Center for Genomic Sciences, UNAM**  
*Undergraduate Researcher*

2017-2019

*Computational Genomics Lab*

Morelos, Mexico

Development of machine learning tools for the improvement and automatization of analysis and biocuration on the REGULONDB.

- Automatic summarization of transcription factors (TFs) properties from text literature.
- Supervised learning and text mining to retrieve regulatory interactions in bacterial literature.
- Text mining to retrieve transporter-substrate interactions.

**INMEGEN**

2018-2019

*Undergraduate Internship*

2015-2016

*Faculty of Medicine-INMEGEN*

Analysis of preterm birth genomic markers in Mexican population.

Mexico City, Mexico

Determination of cytokine concentration in preterm birth samples.

|                         |  |  |
|-------------------------|--|--|
| PUBLICATIONS            | <p>Pagadala, M., Sears, T. J., Wu, V. H., Pérez-Guijarro, E., Kim, H., Castro, A., Talwar, J. V., <b>Gonzalez-Colin, C.</b>, Cao, S., Schmiedel, B. J., Goudarzi, S., Kirani, D., Au, J., Zhang, T., Landi, T., Salem, R. M., Morris, G. P., Harismendy, O., Patel, S. P., Alexandrov, L. B., Mesirov, J. P., Zanetti, M., Day, C.-P., Fan, C. C., Thompson, W. K., Merlino, G., Gutkind, J. S., Vijayanand, P., Carter, H., “Germline modifiers of the tumor immune microenvironment implicate drivers of cancer risk and immunotherapy response”. eng. In: <i>Nature communications</i> 14.1 (May 2023), p. 2744. DOI: 10.1038/s41467-023-38271-5. PMID: 37173324.</p> <p>Schmiedel, B. J., <b>Gonzalez-Colin, C.</b>, Fajardo, V., Rocha, J., Madrigal, A., Ramírez-Suástegui, C., Bhattacharyya, S., Simon, H., Greenbaum, J. A., Peters, B., Seumois, G., Ay, F., Chandra, V., Vijayanand, P., “Single-cell eQTL analysis of activated T cell subsets reveals activation and cell type-dependent effects of disease-risk variants”. eng. In: <i>Science immunology</i> 7.68 (Feb. 2022), eabm2508. DOI: 10.1126/sciimmunol.abm2508. PMID: 35213211.</p> <p>Schmiedel, B. J., Rocha, J., <b>Gonzalez-Colin, C.</b>, Bhattacharyya, S., Madrigal, A., Ottensmeier, C. H., Ay, F., Chandra, V., Vijayanand, P., “COVID-19 genetic risk variants are associated with expression of multiple genes in diverse immune cell types”. eng. In: <i>Nature communications</i> 12.1 (Nov. 2021), p. 6760. DOI: 10.1038/s41467-021-26888-3. PMID: 34799557.</p> <p>Chandra, V., Bhattacharyya, S., Schmiedel, B. J., Madrigal, A., <b>Gonzalez-Colin, C.</b>, Fotsing, S., Crinklaw, A., Seumois, G., Mohammadi, P., Kronenberg, M., Peters, B., Ay, F., Vijayanand, P., “Promoter-interacting expression quantitative trait loci are enriched for functional genetic variants”. eng. In: <i>Nature genetics</i> 53.1 (Jan. 2021), pp. 110–119. DOI: 10.1038/s41588-020-00745-3. PMID: 33349701.</p> <p>Méndez-Cruz, C.-F., Blanchet, A., Godínez, A., Arroyo-Fernández, I., Gama-Castro, S., Martínez-Luna, S. B., <b>Gonzalez-Colin, C.</b>, Collado-Vides, J., “Knowledge extraction for assisted curation of summaries of bacterial transcription factor properties”. eng. In: <i>Database : the journal of biological databases and curation</i> 2020 (Dec. 2020). DOI: 10.1093/database/baaa109. PMID: 33306798.</p> |  |
| CONFERENCE PRESENTATION | <p><b>Poster presentation at Keystone Symposia: Gene Regulation: From Emerging Technologies to New Models.</b></p> <p><i>The cis-regulatory landscape reveals cell type- and context-depedent effects of disease-risk variants affecting human immune cell types.</i></p>  | Summer 2022                                  |
| MENTORSHIP              | <p><b>Elizabeth Marquez-Gomez</b></p> <p>Undergraduate Student, UNAM</p> <p><i>Vijayanand Lab, La Jolla Institute for Immunology</i></p>   | <p>2021-2023</p> <p>La Jolla, California</p> |
| TEACHING                | <p><b>Teaching Assistant</b></p> <p><i>Center for Genomic Sciences</i></p> <p>Bioinformatics Course.</p> <p>Professors: Julio Collado-Vides and Heladia Salgado</p>  | <p>Spring 2019</p> <p>Morelos, Mexico</p>    |
| OUTREACH                | <p><b>Volunteer</b></p> <p><i>Camp Connect Science Class</i></p>   | Summer 2023                                  |
| CERTIFICATIONS          | <b>Introduction to Deep learning, UAEM</b>   | Fall 2015                                    |
| SKILLS                  | <p><b>Programming Languages:</b> R, Python, Bash</p> <p><b>Languages:</b> English, Spanish</p>   |  |