

# Curriculum Vitae of Daniel J. Gomez

## Stanford Genome Technology Center

### DEMOGRAPHIC INFORMATION

#### Current Appointments

Graduate (Biology) Student of California State University, East Bay & Stanford Medicine  
Graduate Research Assistant, Snyder Lab, Stanford Genetics

**Address:** 3165 Porter Dr  
Palo Alto, CA 94304  
Office Phone: +1 (650) 262-1124  
Email: [gomezscientist0@gmail.com](mailto:gomezscientist0@gmail.com)  
Website: [danieljgomez.net](http://danieljgomez.net)

### KEYWORDS/AREAS OF INTEREST

- Exercise Medicine (Exerkine Mechanisms) and Molecular Cell Physiology
- Genomics and Computational Biology
- Tissue- and organism-wide 3D multi-omics (Organokinome Secretion)

### Education and Training

#### *Undergraduate*

2020-22 B.S., Cell and Molecular Biology, San Francisco State University, CA  
(Advisor: Prof. Michael Goldman, Prof. Nicole Salazar-Velmeshev)  
2010-13 Molecular Cell Biology, University of Hawaii at Manoa, HI  
2008-10 Speech & Communication Studies, Ohlone College, CA  
2003-09 Dual Credit (Study Abroad), Modesto Junior College, CA

#### *Predoctoral/Graduate*

2022- M.S., Biological Sciences  
California State University, Hayward, CA  
Department of Genetics, Stanford University School of Medicine  
(Advisor: Prof. Michael Snyder)  
  
2023 Visiting Graduate Research Assistant  
Stanford Cancer Institute  
Department of Structural Biology, Department of Chemical and Systems Biology  
Stanford University School of Medicine (Advisor: Prof. Kacper Rogala)  
  
2012-13 Neurosciences, Neurovirology Graduate Courses  
Department of Cell and Molecular Biology (CMB)  
Department of Tropical Medicine, Medical Microbiology, and Pharmacology  
(DTMMMP), John A. Burns School of Medicine (JABSOM), Honolulu, HI  
(Advisor: Prof. Dr. Bruce Shiramizu, Prof. Vivek Nerurkar)

2012 Translational research in NeuroAIDS and Mental Health (Mentoring Program)  
(Neuroimmune Pharmacology, NIP)  
Department of Neurology  
Division of Neuroimmunology and Neurological Infections  
Johns Hopkins University  
(Advisor: Dr. Avindra Nath, Prof. Amanda Brown)

### Professional Experience

2023- Graduate Student Researcher, Snyder Lab, Stanford Genetics  
2023- Vice President of STEM Programs, Myplaceisahappy1 (MPH1)  
2023- President, Gomera Health Inc. (GomeraTx)  
2022-23 Visiting scientist “User”, SLAC National Accelerator Laboratory  
2022-23 Teaching Associate of Biological Sciences, CSU East Bay  
2022- Virtual Volunteer Associate Fellow of Microbiology & Immunology,  
Neurobiology and Anatomy, Drexel University College of Medicine  
2022 Lab Assistant II of Operations, Roche Diagnostics (RMS)  
2021-22 Formulations Operator II, Robotics, Thermo Fisher Scientific  
2020 Research Assistant of Physiological Sciences, Toxicology, U. of Florida  
2019 Manufacturing Associate Technician, Custom Primers, Thermo Fisher Scientific  
2018 Client Relationship Manager/Developer/Sales Engineer, Poshprofiles  
2017 Sales Scientist, Car Dealerships (VW, Honda)  
2015-16 R&D Coordinator, dosist  
2015 Assistant General Manager, Amoura International Inc.  
2014 Research Assistant of Anesthesia/Neuroanesthesia, UCSD SoM  
2013 Research Assistant of DTMMMP, JABSOM  
2012-13 Biology Assistant of DTMMMP, JABSOM  
2011 Teaching Assistant of Chemistry, University of Hawaii at Mānoa

### SCHOLARLY PUBLICATIONS:

Peer Reviewed Publications: \*Co-Authors

1. **D.J. Gomez\***, T.H. Mulherkar\*, G. Sandel, P. Jain\*, Co-infection and cancer: Host-Pathogen Interaction between Dendritic Cells and HIV-1, HTLV-1, and Other Oncogenic Viruses. *Viruses*. 2022 Sep 14;14(9):2037.
2. **D.J. Gómez\***. Untangling the Microscopic World of Organelles, Cells, Tissues, and Organs: A Focus on the Dysfunctional Golgi Apparatus in Disease Research. *Biology and Life Sciences Forum*. 2023

Non peer-reviewed journal articles

1. **D. Gomez\***, Pioneering Organelle Structural Biology: Golgi apparatus dysfunction in Parkinson’s Disease, Neurodevelopmental Disorders, and Cancer. *Preprints*, 2022, 2022100383.
2. **D. Gomez\***. Unraveling the Structural Dynamics of Human Pegivirus-1 RNA- Dependent RNA Polymerase Using Computational Methods. *ResearchGate*, 2022.

## CONFERENCE ABSTRACTS

1. **Gomez D.J.**, Mulherkar T., Sandel G., Jain P. “Co-infection and cancer: Viral oncogenesis in humans result in liver, blood, and brain cancer by host-pathogen interactions” 12<sup>th</sup> Annual AACR-JCA Joint Conference. (2022)

## SYMPOSIUM POSTERS

1. **Gomez D.J.**, Mulherkar T., Sandel G., Jain P. “Co-infection and Human Cancer: Viral Oncogenesis leads to Host-Pathogen-Tumor-Body Interactions” 22<sup>nd</sup> Microbiology Student Group Symposium in Krutch Theater at Clark Kerr UC Berkeley Campus (2023)

## GRANTS

### Prior Funding

Undergraduate Research Opportunities Program (UROP)

04/22/2013 Office of the Vice Provost for Research and Scholarship (OVPRS)

University of Hawaii at Manoa

John A. Burns School of Medicine (PI: Bruce Shiramizu)

Role: Co-Investigator

IL-17 Production in CNS by Infiltrating T Cells and Glial Cells in the HIV-1-Infected Brain

The goal of this study to gain mechanistic insights into fronto-striatal brain wiring of neuroinflammatory pathways in HIV-Associated Neurocognitive Disorders (HAND) for the purpose of overcoming translational mental health roadblocks in precision medicine.

## EDUCATIONAL ACTIVITIES

### **Teaching**

*Classroom Instruction*

Cal State East Bay

Fall 2022 BIOL 230 (Clinical Microbiology) – 2 sections

Fall 2022 BIOL 270 (Human Anatomy & Physiology I) – 1 section

University of Hawaii at Manoa

Spring 2011 CHEM 161L (General Chemistry I Laboratory) – 2 sections

Modesto Junior College

Summer 2005 English Language – Thailand, Laos (Study Abroad)

*Tutoring*

2011 Private Organic Chemistry Tutor

2011 Chemistry, Biology, Organic Chemistry (Learning Emporium)

### **Workshops/Seminars/Users’ Meetings/Symposiums/Conferences**

11/23 IEDB Virtual User Workshop. La Jolla Institute for Immunology. Immune Epitope Database and Analysis Resource

10/23 User’s Group Meeting (10X Genomics)

09/23 Stanford Genetics Structural Variants and DNA Repeats  
 05/23 Image Processing for Cryo-EM at S2C2-Stanford-Cryo-EM Center (SLAC)  
 10/22 5<sup>th</sup> Annual Cal State East Bay Hack Day (Hack the Outbreak)  
 10/22 IEDB Virtual User Workshop. La Jolla Institute for Immunology. Immune Epitope Database and Analysis Resource. Funded by the National Institute of Allergy and Infectious Diseases (NIAID)  
 09/22 Predicting cancer immunotherapy response by highly multiplexed tumor imaging (Certified)  
 09/22 SSRL/LCLS Users' Meeting. (Stanford-SLAC)  
 06/22 UW-Madison, 42<sup>nd</sup> Steenbock Symposium, "Opening Doors to Cryo-EM"  
 Titan Krios G3 and G4 workshop, Cryo-electron tomography, SerialEM.  
 05/22 Invited Speaker, CSU Northridge, "Data Driven Discovery of Computational Oncology and Modern Molecular Biology"

#### *Mentoring (Advisees)*

2023- Andreea Radu, Nursing, CSUEB  
 2023 UF Minority Health Professional Mentorship Program (MHPMP)  
 Emmanuel Espinoza, Biochemistry, University of Florida (UF)  
 2022 Daniil Mudrov, Cell and Molecular Biology, CSUEB

#### *Undergraduate Students*

2022 Courtney-Jane Lopez, CNA, Pre-Nursing (CSUEB)  
 2022 Yongtao Guan (Pre-med, CSUEB, Ohlone College)

### **RESEARCH ACTIVITIES**

**Research Focus:** Molecular Transducers of Physical Activity (MoTrPAC), Exerkines, Human and Model Organism Fitness, Molecular and Cell Physiology, Genomics and Molecular Training

#### *Journal Reviewer*

Biology  
 Cancers  
 Cells  
 Healthcare  
 International Journal of Molecular Sciences (IJMS)  
 Pharmaceuticals

### **Professional Societies**

2023- Genetics Society of America (GSEA)  
 2023- American Society of Human Genetics (ASHG)  
 2022- ISCB: International Society for Computational Biology  
 2022- ACA: The Structural Science Society  
 2022- American Association for Cancer Research (AACR)  
 2022- Society for Neuro-Oncology (SNO)

2022- American Society for Virology (ASV)  
 2020- American Society Biochemistry and Molecular Biology (ASBMB)  
 2013- The American Association of Immunologist (AAI)  
 2012- Society of NeuroImmune Pharmacology (SNIP)

## **Industry**

2023 President, Treasurer, and Secretary - Gomera Heath Inc.  
 2023 Chairman, Gome-Writings Inc. (non-profit, *501c3 status pending*)

## **RECOGNITION**

### **Invited Talks, Panels**

04/23 Speaker, Grand Slam Graduate Research Presentation, “Virophysics and Structural Dynamics of HPgV-1 NS5B Using Computational Methods,” Hayward, CA  
 03/23 Speaker, Cells 2023 Conference of MDPI/sciforum, “Pioneering organelle structural biology: Golgi apparatus dysfunction and cascades of fatal pathways in cancer,” Virtual.  
 01/23 Speaker, Drexel Medicine, “Landscape of myeloid and astrocyte phenotypes in acute MS lesions and future technological directions,” Virtual. (Jain Lab)  
 10/22 Speaker, Chemistry 2022: Global Virtual Summit on Chemistry & Pharmaceutical Chemistry, “Ribozyme mechanisms and Clinical Gene Therapy,” Virtual.  
 10/22 Speaker, Cancer Webinar 2022: 5<sup>th</sup> International Webinar on Cancer Research and Oncology, “A human retrovirus in Neuro-Oncology, interventional conductome studies, and theranostics in Nuclear Medicine,” Virtual.

## **OTHER PROFESSIONAL ACCOMPLISHMENTS**

### **Oral Presentations**

10/22 Microbiology Control, Microbiology & Immunology, Neurobiology & Anatomy, Drexel Medicine, Philadelphia, PA; **Gomez D.J.** Cancers: PCNSL outcome in EBV+/HIV Coinfection and HTLV connection in HIV/AIDS patients.  
 10/22 California State University, East Bay, Hayward, CA; **Gomez D.** HTLV-1: From neuroimaging to neurosurgery and biomarkers of neuroinflammation and neurodegeneration in HAM/TSP progression.  
 10/22 Hack the Outbreak. California State University, East Bay, Hayward, CA; **Gomez D.** PathAR.  
 09/22 California State University, East Bay, Hayward, CA; **Gomez D.** Deltaretrovirus: HTLV.  
 09/22 California State University, East Bay, Hayward, CA; **Gomez D.** “An intasome story: Structural basis of host protein hijacking in human T-cell

leukemia virus integration.

### **Certifications**

2016	Intro to SQL for Data Science — DataCamp
2017	Python for Data Science and Machine Learning Bootcamp
2017	Google's Go (golang) Programming Language
2017	Data Science and Machine Learning Bootcamp with R
2017	DNA Research with Biopython
2019	Life Sciences Responsible Conduct of Research Course (RCR)
2019	IRB Training
2022	Cyber Security for Lab Users, SLAC National Accelerator Laboratory
2022	Predicting cancer immunotherapy response by highly multiplexed tumor imaging
2023	SSRL RapiData 2023: Data Collection and Structure Solving: A Practical Course in Macromolecular X-Ray Diffraction Measurement (Stanford/SLAC)
2023-	Fundamentals of Data Science in Precision Medicine and Cloud Computing