

Curriculum Vitae of Daniel Gomez Stanford Genome Technology Center

DEMOGRAPHIC INFORMATION

Current Appointments

Graduate Student of California State University, East Bay & Stanford Medicine

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Education and Training

Undergraduate

2003-09 Dual Credit, Modesto Junior College, CA
2008-10 Speech & Communication Studies, Ohlone College, CA
2010-13 Molecular Cell Biology, University of Hawaii at Mānoa, HI
2018-20 Microbiology & Cell Science, University of Florida, FL
2020-22 B.S., Cell and Molecular Biology, San Francisco State University, CA

Predoctoral/Graduate

2022- M.S., Biological Sciences, Cal State East Bay, Hayward, CA
2023- Fundamentals of Data Science in Precision Medicine and Cloud Computing, Stanford Data Ocean, Stanford School of Medicine, Department of Genetics, Stanford Deep Data Research Center

Professional Experience

2011 Teaching Assistant of Chemistry, University of Hawaii at Manoa
2012-13 Biology Assistant of Tropical Medicine, Medical Microbiology, and Pharmacology (DTMMMP), John A. Burns School of Medicine
2013 Research Assistant of DTMMMP, John A. Burns School of Medicine
2014 Research Assistant of Anesthesia/Neuroanesthesia, UCSD School of Medicine, VA Hospital
2019 Manufacturing Associate, Custom Primers, Thermo Fisher Scientific
2020 Research Assistant of Physiological Sciences, Toxicology, University of Florida College of Veterinary Medicine (UFCVM)
2021-22 Formulations Operator II, Thermo Fisher Scientific
2022 Lab Assistant II of Operations, Roche Diagnostics
2022- Virtual Associate Fellow of Microbiology & Immunology, Neurobiology and Anatomy, Drexel University College of Medicine (DUCOM)
2022-23 Teaching Associate of Biological Sciences, CSU East Bay
2022-23 Visiting scientist "User", SLAC National Accelerator Laboratory
2023- CEO & President, Gomera Health Inc.
2023- Chairman, Gome Writings Inc. (GenoWrite Compassion) [501c3 pending]
2023- Vice President of STEM Programs, Myplaceisahappy1 (MPH1)

2023 Visiting Master's Student of Structural Biology, Stanford University School of Medicine, Stanford Cancer Institute
2023- Graduate Research Assistant, Genome Technology Center, Stanford Genetics

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
3. **D.J. Gomez**, G. Sandel, R. Kulkarni, J. Joseph, P. Jain*. Immunotherapy for Infection-Related Cancers in People Living with HIV: Current Status, Challenges, and Future Directions. *Frontiers in Cellular and Infection Microbiology*. 2023 (In preparation)

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" 12th 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" 22nd 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)
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.
Role: Co-Investigator

KEYWORDS/AREAS OF INTEREST

- Tissue- and organism-wide 3D multi-omics
- Genomics and Computational Biology (spatiotemporal-omics)
- Exercise studies with high resolution wearables

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 Chemistry, Biology, Organic Chemistry (Learning Emporium)

Workshops/Seminars/Users' Meetings/Symposiums

05/22 Invited Speaker, CSU Northridge, "Data Driven Discovery of Computational Oncology and Modern Molecular Biology"
06/22 UW-Madison, 42nd Steenbock Symposium, "Opening Doors to Cryo-EM" Titan Krios G3 and G4 workshop, Cryo-electron tomography, SerialEM.
09/22 SSRL/LCLS Users' Meeting. (Stanford-SLAC)
09/22 Predicting cancer immunotherapy response by highly multiplexed tumor imaging
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)
10/22 5th Annual Cal State East Bay Hack Day (Hack the Outbreak)
05/23 Image Processing for Cryo-EM at S2C2-Stanford-Cryo-EM Center (SLAC)
08/23 Spatial World Tour (Americas): San Francisco (10X Genomics)
09/23 SSRL/LCLS Users' Meeting (Stanford-SLAC)
11/23 IEDB Virtual User Workshop. La Jolla Institute for Immunology. Immune Epitope Database and Analysis Resource.

Mentoring (Advisees)

2023- Andreea Radu, Nursing, CSUEB

2023 UF MHPMP Mentor, Minority Health Professional Mentorship Program
2023 Emmanuel Espinoza, Biochemistry, University of Florida (UF)
2022 Daniil Mudrov, BS, Cell and Molecular Biology (Genentech)

Undergraduate Students

2022 Courtney-Jane Lopez, CNA, Pre-Nursing (CSUEB)
2022 Yongtao Guan (Pre-med)
2022 Arielle Vue, Pre-Nursing (CSUEB)

RESEARCH ACTIVITIES

Research Focus: Data Analysis of Network Multiomics, Molecular Transducers, Exerkines, Human Fitness, Data Science and Cloud Computing (AI/ML) in Precision Health, Genomic Technology

Journal Reviewer

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

Professional Societies

2012-Present Society of NeuroImmune Pharmacology (SNIP)
2013-Present The American Association of Immunologist (AAI)
2020-Present American Society Biochemistry and Molecular Biology (ASBMB)
2022-Present American Society for Virology (ASV)
2022-Present Association for Molecular Pathology (AMP)
2022-Present Society for Neuro-Oncology (SNO)
2022-Present American Associate for Cancer Research (AACR)
2022-Present ACA: The Structural Science Society
2022-Present ISCB: International Society for Computational Biology
2023-Present Association for Pathology Informatics (API)
2023-Present American Society of Human Genetics (ASHG)
2023-Present Genetics Society of America (GSEA)

Industry

2023 President - Gomera Heath Inc.
2023 Chairman - Gome Writings Inc. (non-profit)

RECOGNITION

Invited Talks, Panels

10/22 Speaker, Cancer Webinar 2022: 5th International Webinar on Cancer Research and Oncology, "A human retrovirus in Neuro-Oncology,

interventional conductome studies, and theranostics in Nuclear Medicine,” Virtual.

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

OTHER PROFESSIONAL ACCOMPLISHMENTS

Oral Presentations

- 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.
- 10/22 Hack the Outbreak. California State University, East Bay, Hayward, CA; **Gomez D.** PathAR.
- 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 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.

Certifications

- 2016 Intro to SQL for Data Science Course – DataCamp
- 2017 Python for Data Science and Machine Learning
- 2017 Google’s Go (golang) Programming Language
- 2017 Data Science and Machine Learning Bootcamp with R
- 2017 DNA Research with Biopython

2018	Medical School Pathology
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	Writing High Performance Python
2023	Scientific Computing with NumPy – Python Data Science
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