Grace V. Santos

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| Phone: (949) 677-5166  Email: gvs2113@cumc.columbia.edu | Columbia University  Mailman School of Public Health |

New York City, NY 10032

# Research Experience

**Fall 2023 Research Rotation with Dr. Robbie Parks** September 2023 – Present

***Columbia University Mailman School of Public Health,*** New York, NY

* Utilize CDC Wonder data to look at spaciotemporal trends in mortality for Alzheimer’s Disease and Related Dementia cause of death across various social and health disparities

**APHL – CDC Environmental Health Fellow** July 2022 – July 2023

***New Hampshire Public Health Laboratories***, Concord, NH

* Develop and validate a new testing capability for LC-MS/MS analysis of urine metabolites of polycyclic aromatic hydrocarbons (PAHs) using a method from CDC Division of Laboratory Sciences
* Contributed to sample preparation, performance of analytical runs and completing and verifying data analysis for methods associated with ICP/MS analysis of toxic metals in urine and blood matrices
* Train on several other Biomonitoring lab methods to gain proficiency on ICP-MS and LC-MS/MS operation
* Strengthen personal development skills of leadership, communication, and collaboration through workshops and virtual classroom trainings

**Laboratory Operations Manager** June 2021 – June 2022

***Bowles Agroecology Lab***, Berkeley, CA

* Tested and developed protocol for analyzing phosphorous concentration in soil samples derived from other previous methods
* Performed several other routine protocols to contribute to graduate and post-graduate student research
* Acted as safety coordinator to monitor proper storage and containment of chemicals, train new staff on basic safety precautions, and to maintain proper hazardous waste disposal
* Implemented nitrile glove and plastic recycling programs to improve lab sustainability
* Supervised the scheduling and general training of 7 undergraduate researchers
* Navigated supply shortage of necessary consumables due to COVID-19

**Undergraduate Research Assistant** October 2020 – May 2021

***Bowles Agroecology Lab*,** Berkeley, CA

* Performed laboratory tasks associated with furthering the research of doctoral students, including chemical and geological procedures for analysis of organic samples
* Prepared reagents and solutions to be used in experimentation
* Maintained an efficient lab space by cleaning glassware and other commonly used materials, implementing an organizational storage system and regularly disposing of trash and recycling

# Education

Columbia University September 2023 - Present

The Joseph L. Mailman School of Public Health

Doctor of Philosophy in Environmental Health Sciences

University of California, Berkeley August 2020 – May 2022

Bachelor of Arts Degree in Chemistry, Minor in Toxicology

Irvine Valley College (transferred) June 2019 – May 2020

Associate in Arts Degree in Natural Sciences and Mathematics, Major in Chemistry

Colorado State University (transferred) August 2018 – May 2019

Dual Major in Biomedical and Mechanical Engineering

# Honors and Awards

**Cal Grant A Competitive Award**  Fall 2020 – Spring 2021

Federal Scholarship awarded to students transferring from a California Community College to a California State University, one of the Universities of California or an eligible Private College. 13,000 awards are offered per year. Selection is based on FASFA application and GPA.

**Magna Cum Laude** May 2020

Recognition of academic excellence awarded for 3.75 to 3.99 GPA. Given graduation honors for Associate in Arts in Natural Sciences and Mathematics degree from Irvine Valley College.

**IGETC Certificate of Achievement** May 2020

Intersegmental General Education Transfer Curriculum completion of 60 UC-transferable units that satisfy 7 subject areas with a minimum GPA of 2.4.

**Presidential Academic Recognition Scholarship** Fall 2018 – Spring 2019

$50,000 scholarship awarded based on prior academic achievement and potential to contribute to the institution’s excellence in the chosen field of study. Total amount distributed over 5-year program.

# Leadership Roles

**Berkeley Engineers and Mentors (B.E.A.M) Club**

***Site Leader Committee Member*** Fall 2021 – Spring 2022

* Lead a “site” group of four to six student mentors in organizing and teaching weekly STEM-centered lessons to a group of 10 to 20 elementary school students with limited accessibility to science curriculum
* Held additional weekly meetings to plan the group’s individual responsibilities, supplies needed and to answer questions
* Provided personalized feedback to each group member after the lesson to continue progress and build confidence among the group
* Coordinated weekly group bonding activities to encourage teamwork and to boost morale
* Supervised the creation of end-of-year lesson based on student’s interests

***Mentor Development Committee Member*** Fall 2021 – Spring 2022

* Developed and presented two curated lessons for the entire club staff of over 100 mentors based on classroom management and how to be adaptable
* Contributed to the planning and execution of eight other lessons to further grow the member’s leadership skills and interpersonal relationships within in the club
* Lead an interactive breakout session at both orientation events to encourage member retention and recruitment
* Supervised the overall success of four “site” groups about their execution of the lessons, ability to work together and personal growth

***Student Mentor*** Spring 2021

* Prepared and presented weekly STEM-centered educational lessons for a group of elementary school students with low accessibility to science education
* Taught one module of the lesson to the students by introducing the topic, guiding the students through an experiment or demonstration, and then asking probing questions
* Contributed to an end-of-year, uniquely tailored lesson meant to teach the students about a topic of their choosing
* Developed strong team-building and collaborative skills in working within a “site” group of four to six like-minded peers

# Presentations

Santos, Grace. “NH PHL New Method: Liquid Chromatography Mass Spectroscopy (LC-MS/MS) Analysis of Polycyclic Aromatic Hydrocarbons.” Association of Public Health Laboratories (APHL) Annual Meeting, May 23, 2023. Poster presentation.

Santos, Grace. “Berlin Study Plan & Updates.”BiomonitoringNH Bi-Annual Technical Advisory Committee (TAC) Meeting, September 29, 2022. Microsoft PowerPoint presentation.

Waterhouse, H. Esquivel, K﻿.E., Libbey, K. Thompson, J. Santos, G.V., and Bowles, T.M. *Nitrogen Cycling and Provisioning across a Gradient of Soil Health Management in Organic Farming Systems* [Conference Presentation]*.* ASA, CSSA, SSSA Annual Meeting. 2021

# Professional Training

* Fellowship Training Plan, Association of Public Health Laboratories (August 2022 – June 2023)
* LC-MS/MS Analysis of Polycyclic Aromatic Hydrocarbon (PAH) in Urine Method Training, New Jersey Department of Health (NJDOH) (February 2023)
* Leading and Navigating Change, NH Bureau of Education and Training (January 2023)
* Introduction to Liquid Chromatography, Phenomenex (October 2022)
* Leadership Foundations, NH Bureau of Education and Training (September 2022)
* Supporting Air Quality and Climate Change Planning with GLIMPSE, US Environmental Protection Agency (September 2022)
* Health Literacy for Public Health Professionals, Centers for Disease Control TRAIN (August 2022)
* Facilitative Training Skills, Leadership Strategies (August 2022)
* Working Together to Improve Citizen Science Data Quality: A Webinar for Government Agencies, Association of Public Health Laboratories (August 2022)

# Professional Affiliations

American Public Health Association October 2022 – Present

Student Membership

Technical Advisory Committee (TAC) August 2022 – Present

NH PHL

# References

**Dr. Robbie Parks,** Assistant Professor

Environmental Health Sciences

Columbia University, Mailman School of Public Health

722 W 168th St, New York, NY 10032

Phone: (212) 342-4717

Email: robbie.parks@columbia.edu

**Dr. Timothy Bowles**, Assistant Professor

Environmental Science, Policy, and Management

University of California, Berkeley

Wellman Hall Rm. 216, Berkeley CA 94704

Phone: (502) 500-1812

Email: timothy.bowles@berkeley.edu