

**CONTACT
INFORMATION**

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STATEMENT of PURPOSE

My work focuses on the role of ambient air pollution and social stressors on clinical trial treatment efficacy among susceptible populations. It interweaves environmental epidemiology with pharmacoepidemiology by employing geospatial analysis and novel biostatistics modeling to understand the impact of *place* on drug efficacy.

EDUCATION

PhD	Drexel Dornsife School of Public Health Department of Environmental and Occupational Health Advisor: Jane E. Clougherty, MSc, ScD Dissertation title: <i>Secondary Analysis of Clinical Trial Results to Assess Effect Modification by Environmental and Social Exposure on Treatment Efficacy of AsthmaNet Trial</i>	June 2024
MPH	Columbia University Mailman School of Public Health Department of Environmental Health Science Certificate in Molecular Epidemiology	May 2020
BSc. Cum Laude	City College of New York Bachelor of Science in Biology Minor: Chemistry	June 2018

RESEARCH & PROFESSIONAL EXPERIENCE**Research**

2024 - Present	<i>Postdoctoral Fellow</i> Drexel Dornsife School of Public Health Philadelphia, PA Conceptualize, develop and conduct research on the impact of air pollution on the effectiveness of step-up treatment strategies for pediatric asthma in Philadelphia. Clean electronic health record datasets containing patient specific medical histories and asthma progression from 2005-2019. Conduct statistical analyses to evaluate the impacts of air pollution on pharmaceutical responses for asthma.
2020 - 2024	<i>Doctoral Candidate</i> Drexel Dornsife School of Public Health Philadelphia, PA Spearheaded the secondary analysis of clinical trial results to assess treatment efficacy impacted by environmental and social exposures, using complex biostatistical models and geospatial analysis. Authored and co-authored several articles in peer-reviewed journals, translating complex research findings into funding awards. Presented findings at multiple international conferences, contributing to broader discussions on public health and epidemiology.

2018-2020	<i>Research Fellow</i> Columbia University Mailman School of Public Health Developed an epidemiological study to assess asthma prevalence after hurricane Maria in San Juan Puerto Rico. Collaborate with interprofessional research fellows to develop and implement a health assessment. Coordinated research efforts with international partners, including academics and health institutions in Puerto Rico, to enhance the validity and reach of observational studies. Managed cross-functional teams to ensure timely delivery of research findings.	New York, NY
2017-2018	<i>Research Assistant</i> Montefiore Medical Center Conducted qualitative research on the effect of traditional and electronic consent forms on Biobank enrollment. Assisted with the data collection process by administering blind study surveys. Recruited participants in Bronx health clinics to participate in a Biobank trial. Assisted with data analysis of electronic consent form effects on trust and material comprehension.	Bronx, NY
2017-2018	<i>Undergraduate Research Fellow</i> Columbia University Mailman School of Public Health Selected and awarded for a NIEHS-funded program to conduct graduate-level research. Conducted a systematic literature review on cardiovascular disease and epigenetics. Skilled in data quality assessments to support epidemiological research and publications.	New York, NY
<u>Professional Experience</u>		
2022-2024	<i>Graduate Teaching Assistant</i> Drexel Dornsife School of Public Health Course: Exposure Science Imparted lectures on the tools and techniques used to measure pollution exposures; GIS uses for exposure assessment and the role of exposure assessment in occupational settings Created teaching materials (slides, worksheets, evaluation rubrics and assessment tools). Host teaching office hours to help students with content-related questions.	Philadelphia, PA
2018-2020	<i>Administrative Assistant, PrIMER</i> Columbia Mailman School of Public Health, Environmental Health Sciences Mentored undergraduate research trainees in the EHS PrIMER program. Designed and co-led weekly professional development workshops for trainees. Created, collected, and analyzed survey data to evaluate program outcomes.	New York, NY
2019-2020	<i>Graduate Teaching Assistant</i> Columbia Mailman School of Public Health, Environmental Health Sciences Courses: GIS & Environment, Health, and Justice Developed course materials (i.e., quizzes, exams, and group projects) for the course. Assisted with developing course syllabus and collaborated with instructor on course content. Host teaching office hours to help students with content-related questions.	New York, NY
2015-2017	<i>Data Management & Analyst</i> Mount Sinai Health System	New York, NY

Conducted surveys for the Minority Outreach Recruitment Study to educate on breast and cervical cancer screening and preventive care.

Developed support activities to increase adherence to screening guidelines in the Harlem community.

Maintained and populated the study database with survey responses, including data entry and quality checks.

Taught seminars for the Esperanza y Vida breast and cervical cancer education program.

TEACHING EXPERIENCE

- 2023 **Co-Instructor**, Department of Environmental and Occupational Health, Drexel University
EOH812: Environmental Exposure Sciences (Graduate)
- 2023 **Teaching assistant**, Department of Environmental and Occupational Health, Drexel University
EOH812: Environmental Exposure Sciences (Graduate)
- 2020 **Teaching assistant**, Department of Environmental Health Sciences, Columbia University
P8371: Public Health GIS (Graduate)
- 2019 **Teaching assistant**, Department of Environmental Health Sciences, Columbia University
PUBHG4200: Environment, Health, and Justice: concepts and practice (Undergraduate)

PUBLICATIONS

Gomez, L., Clougherty, J. E., Holguin, F., Kinnee, E. J., Kaufman, J. D., Young, M. T., Fitzpatrick, A. M., Phipatanakul, W., Mauger, D., & McClure, L. A. (n.d.). Asthma Treatment Efficacy Modification by Healthcare Access: A Reanalysis of AsthmaNet Step-Up Yellow Zone Inhaled Corticosteroids to Prevent Exacerbations (STICS) Clinical Trial. Available at SSRN 4784559.

Gomez, L., Kinnee, E., Holguin, F., & Clougherty, J. E. (2023). Estimated Travel Time and Distance to Trial Site: Modifiers of Step-Up Treatment Efficacy in Black Adults with Poorly Controlled Asthma. 2023.

Gomez, L., Kinnee, E. J., Kaufman, J. D., Mauger, D. T., Holguin, F., & Clougherty, J. E. (2022). PM2.5 and NO2 as Potential Modifiers of Clinical Trial Results on Asthma Exacerbation and Control. 2022.

Gomez, L., Kinnee, E., Kaufman, J. D., Holguin, F., Young, M. T., & Clougherty, J. E. (2021). Modification of Asthma Clinical Trial Treatment Efficacy by Social and Environmental Exposures. 2021(1).

Navas-Acien, A., Domingo-Relloso, A., Subedi, P., Riffo-Campos, A. L., Xia, R., **Gomez, L.**, Haack, K., Goldsmith, J., Howard, B. V., & Best, L. G. (2021). Blood DNA methylation and incident coronary heart disease: Evidence from the strong heart study. JAMA Cardiology, 6(11), 1237–1246.

Domingo-Relloso, A., Tellez-Plaza, M., Bozack, A., **Gomez, L.**, Herreros, M., Devereux, R., Baccarelli, A., Umans, J., Howard, B., & Zhao, J. (2020). Common DNA methylation signatures of arsenic exposure and incident cardiovascular disease in the Strong Heart Study. 2020(1).

Navas-Acien, A., Domingo-Relloso, A., Tellez-Plaza, M., **Gomez, L.**, Herreros, M., Devereux, R. B., Baccarelli, A., Umans, J. G., Howard, B., & Zhao, J. (2020). Abstract MP31: Blood DNA Methylation Signatures of Incident Coronary Heart Disease: An Epigenome-wide Analysis in the Strong Heart Study. Circulation, 141(Suppl_1), AMP31–AMP31.

RESEARCH AND TRAINING AWARDS

2024	Outstanding Dissertation Award, School of Public Health Finalist
2023	PRCCEH Climate Change Pilot Grant to evaluate the modifying effect of air pollution on asthma step-up treatment effectiveness among children in Philadelphia. Amount \$25,000
2023	ISEE Travel award
2023	Global Engagement Funding Award ISEE Taiwan
2023	Teck-Kah Lim Travel Subsidy Award. ISEE-NAC Corvallis, OR
2023	Teck-Kah Lim Travel Subsidy Award SER Portland, OR
2022 – 2023	NIMNHD 5T37MD014251-04: National Institute on Minority Health and Health Disparities (NIMHD) Minority Health and Health Disparities Research Training Program, through Global Alliance for Training in Health Equity Research grant 5T37MD014251 as a predoctoral fellow. (PI: Dr. Gina Lovasi)
2020	Mailman School of Public Health EHS Student Award
2017 – 2018	1-R25-ES025505-03 grant: "Program to Inspire Minority Undergraduates in Environmental Health Science Research" (PI: Dr. Ana Navas-Acien)

ACADEMIC & LEADERSHIP EXPERIENCE

Relevant Biostatistics, Statistics and Programming Coursework

Design and Analysis of Clinical Trials	Bayesian Analysis for Urban Health
Longitudinal Data Analysis	Data Science using R
Generalized Linear Models	Analysis of Environmental Data
Survival Data analysis	Analysis of Categorical data
Intermediate Biostatistics	Research Methods and Applications
Linear Statistical Models	Introduction to Computing
Advanced Analytic Methods	Statistics in Earth and Environment
Applied Regression	Elements of Calculus and Statistics

Service

2023-2024	Curriculum & Assessment Committee (CAC): Doctoral Student Representative
2023-2024	Public Health Doctoral Student Advisory Group (PHDSAG): President
2022-2023	Public Health Doctoral Student Advisory Group (PHDSAG): Event Coordinator
2018-2020	One Health Initiative: Treasurer
2018-2020	Healthcare Data Analytics: Event Coordinator
2018-2020	Columbia IPE Service-Learning Fellowship: Research Fellow
2018-2020	EOH Climate and Health Journal Club: co-founder
2019-2020	R.I.S.E. Program: Peer-Mentor

Professional Organizations and Societies

2021	SER member
2020	ISEE member
2017	National Society of Leadership and Success

Skills

Programming: R(Advanced), SAS (Beginner)
 Productivity: Wordfast, Endnote, Microsoft, and Google Suites
 Language: Native Spanish, English, Basic French

Certificates

Certificate in College Teaching 2023-24

Molecular Epidemiology 2020