

LIZBETH F. GÓMEZ, PhD, MPH

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PROFESSIONAL SUMMARY

Environmental epidemiologist and postdoctoral researcher with specialized expertise in evaluating the interaction between environmental factors (air pollution, climate variables) and pharmaceutical treatments on health outcomes. Proficient in pharmacoepidemiological research methods, real-world evidence generation from large EHR databases, and statistical programming (R, SAS). Proven track record conducting rigorous observational studies, publishing in peer-reviewed journals, and developing independent research questions. Passionate about using epidemiological evidence to improve health equity and inform clinical and policy decision-making.

EDUCATION

PhD, Environmental Epidemiology	2024
<i>Drexel Dornsife School of Public Health, Philadelphia, PA</i>	
Dissertation: Modification in Responses to Asthma Treatment by Environmental and Social Exposures	
MPH, Public Health	2020
<i>Columbia University Mailman School of Public Health, New York, NY</i>	
BSc, Biology	2018
<i>City College of New York, New York, NY</i>	

PROFESSIONAL EXPERIENCE

Postdoctoral Associate	January 2026 – Present
<i>Rutgers University – Center for Climate, Health and Healthcare, New Brunswick, NJ</i>	
<ul style="list-style-type: none">Examine synergistic effects of climate exposures (extreme heat, PM_{2.5}) and medication use on health outcomes in vulnerable populations using national Medicaid dataLink large-scale administrative health databases with gridded climate data at ZIP code level for drug-environment interaction researchCollaborate with interdisciplinary team to produce evidence informing clinical and policy decisions for climate-vulnerable populations	
Postdoctoral Researcher	November 2024 – January 2026
<i>University of Pennsylvania Perelman School of Medicine, Philadelphia, PA</i>	
<ul style="list-style-type: none">Conducted comparative effectiveness studies evaluating pharmaceutical treatments in real-world settings using electronic health record data from Penn Medicine Health SystemsDesigned and executed observational studies examining modification of treatment effectiveness by environmental and social factors; developed complex statistical models and performed sensitivity analysesLed advanced research projects evaluating validity, usefulness, and bias of augmenting EHR data with external data sources; assessed data quality and implemented algorithm validationCollaborated with biostatisticians, clinicians, and epidemiologists to translate complex data into actionable public health insightsIndependently developed research questions, managed all study phases from conceptualization to publication	
Research Scientist	Fall 2024
<i>Drexel Dornsife School of Public Health, Philadelphia, PA</i>	
<ul style="list-style-type: none">Conceptualized, developed, and conducted research on the impact of air pollution on the effectiveness of step-up treatment strategies for pediatric asthma in PhiladelphiaCleaned electronic health record datasets containing patient-specific medical histories and asthma progression data (2005–2019)Conducted statistical analyses to evaluate the impacts of air pollution on pharmaceutical responses for asthma	
Doctoral Candidate	2020 – 2024

Drexel Dornsife School of Public Health, Philadelphia, PA

- Spearheaded secondary analysis of clinical trial results to evaluate the impact of environmental and social exposures on asthma treatment efficacy
- Designed complex observational study protocols and conducted geospatial analysis using advanced statistical modeling techniques
- Published findings in leading peer-reviewed journals and presented research at international conferences, securing funding for further studies

Research Fellow

2018 – 2020

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

- Developed an epidemiological study to assess asthma prevalence following Hurricane Maria in San Juan, Puerto Rico
- Collaborated with interprofessional research fellows to develop and implement a health assessment
- Coordinated research efforts with international academic and health institution partners in Puerto Rico to enhance the validity and reach of observational studies

Research Assistant

2017 – 2018

Montefiore Medical Center, Bronx, NY

- Conducted qualitative research on the effect of traditional and electronic consent forms on Biobank enrollment
- Administered blind study surveys and recruited participants in Bronx health clinics for a Biobank trial
- Assisted with data analysis of electronic consent form effects on trust and material comprehension

Undergraduate Research Fellow

2017 – 2018

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

- Selected and awarded a NIEHS-funded fellowship (1-R25-ES025505-03) to conduct graduate-level research
- Conducted a systematic literature review on cardiovascular disease and epigenetics
- Performed data quality assessments to support epidemiological research and publications

Data Analyst

2015 – 2017

Mount Sinai Health System, New York, NY

- Conducted surveys for the Minority Outreach Recruitment Study to educate participants 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

Co-Instructor

2024

Department of Environmental and Occupational Health, Drexel University
EOH812: Environmental Exposure Sciences (Graduate)

Graduate Teaching Assistant

2022 – 2024

Department of Environmental and Occupational Health, Drexel University
EOH812: Environmental Exposure Sciences (Graduate)

Graduate Teaching Assistant

2020

Department of Environmental Health Sciences, Columbia University
P8371: Public Health GIS (Graduate)

Graduate Teaching Assistant

2019

Department of Environmental Health Sciences, Columbia University
PUBHG4200: Environment, Health, and Justice (Undergraduate)

Administrative Assistant, PrIMER Program

2018 – 2020

Columbia Mailman School of Public Health, Environmental Health Sciences, New York, NY

- Mentored undergraduate research trainees and co-led weekly professional development workshops
- Created, collected, and analyzed survey data to evaluate program outcomes

GRANTS AND FUNDING

PRCCEH Climate Change Pilot Grant	2023
To evaluate the modifying effect of air pollution on asthma step-up treatment effectiveness among children in Philadelphia. Amount: \$25,000	
NIMHD Minority Health and Health Disparities Research Training Program	2022 – 2023
Grant 5T37MD014251-04, Global Alliance for Training in Health Equity Research. Role: Predoctoral Fellow. PI: Dr. Gina Lovasi	
NIEHS Program to Inspire Minority Undergraduates in Environmental Health Science Research	2017 – 2018
Grant 1-R25-ES025505-03. PI: Dr. Ana Navas-Acien	

HONORS AND AWARDS

Hablemos Ciencia Postdoctoral Poster Award, 1st Place	2025
Outstanding Dissertation Award, School of Public Health Finalist	2024
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	2023
Mailman School of Public Health EHS Student Award	2020

PROFESSIONAL ACTIVITIES AND SERVICE

Leadership and Service

ISEE SNRN Rapid Response Initiative (RRI): Co-founder	2025 – Present
ISEE Student and New Researcher Network (SNRN): Co-liaison, Membership Committee	2025 – Present
ISPE: Co-chair, Environmental Pharmacoepidemiology SIG	2025 – Present
ISEE NAC Conference Planning Committee Member	2025 – 2026
Penn Postdoctoral Association: Co-chair, Social Committee	2025 – 2026
USTRIVE: College Applicant Advisor	2025 – 2026
Curriculum & Assessment Committee (CAC): Doctoral Student Representative	2023 – 2024
Public Health Doctoral Student Advisory Group (PHDSAG): President	2023 – 2024
Public Health Doctoral Student Advisory Group (PHDSAG): Event Coordinator	2022 – 2023
Columbia IPE Service-Learning Fellowship: Research Fellow	2018 – 2020
EOH Climate and Health Journal Club: Co-founder	2018 – 2020
One Health Initiative: Treasurer	2018 – 2020
Healthcare Data Analytics: Event Coordinator	2018 – 2020
R.I.S.E. Program: Peer Mentor	2019 – 2020

Peer Review

Journal of Urban Health	2025 – Present
Journal of Asthma	2024 – Present
BMC Pulmonary Medicine	2024 – Present
Springer Nature	2024 – Present
Environmental Health Perspectives	2023 – Present
Society for Epidemiologic Research (abstract review)	2023 – Present
International Society for Environmental Epidemiology (abstract review)	2021 – Present

Professional Memberships

International Society for Pharmacoepidemiology (ISPE)	2025 – Present
Society for Epidemiologic Research (SER)	2021 – Present
International Society for Environmental Epidemiology (ISEE)	2020 – Present

PROFESSIONAL DEVELOPMENT

INSPIRE Grant Writing Group, Rutgers University	2025 – 2026
Certificate in College Teaching, Drexel University	2023 – 2024
Molecular Epidemiology Certificate, Columbia University	2023 – 2024
Bayesian Analysis for Urban Health, Drexel Urban Health Institute	2022 – 2023

SKILLS

Programming: R, SAS, ArcGIS, R Shiny, ArcGIS Online

Languages: Spanish (native), English (native), French (basic)

Research: Literature review, observational study design, regression analysis, spatial statistical methods, propensity score methods, survey design, participant recruitment, qualitative interviewing, electronic health record data analysis, geospatial analysis

PUBLIC ENGAGEMENT

Gómez, L.F. "When the air we breathe feels unfriendly: how science can help us understand asthma." *Your Neighborhood Scientist*. Forthcoming, June 2025.

PUBLICATIONS

Peer-Reviewed Journal Articles

- Gómez, L.F., Lactaoen, K.D., Gleeson, P.K., Schreiber, A., Christie, J.D., Apter, A.J., Hubbard, R.A., Weissman, G.E., & Himes, B.E. (2026). Impact of the COVID-19 pandemic on adult asthma-related health care utilization. *Journal of Allergy and Clinical Immunology: Global*, 5(3), 100675. <https://doi.org/10.1016/j.jacig.2026.100675>
- Gómez, L.F., Szeto, J.J., Radack, J.K., Novick-Goldstein, N.P., Scott, K.A., Murosko, D.C., Gibbs, K.A., Whitman, E., Levin, J.C., Lorch, S.A., DeMauro, S.B., Kenyon, C.C., Just, A.C., Burris, H.H., & Nelin, T.D. (2025). Associations of early life ambient PM_{2.5} exposure with asthma risk in a cohort of preterm infants with bronchopulmonary dysplasia. *Pediatric Pulmonology*, 60(12), e71432. <https://doi.org/10.1002/ppul.71432>
- Gómez, L.F., Kinnee, E.J., Young, M.T., Kaufman, J.D., Fitzpatrick, A.M., Nyenhuis, S.M., Solway, J., White, S.R., Naureckas, E.T., Phipatanakul, W., Wechsler, M.E., Kunselman, S.J., Mauger, D.T., McClure, L.A., Bilal, U., Lazarus, S.C., Holguin, F., & Clougherty, J.E. (2025). Asthma treatment response modified by fine particulate matter, nitrogen dioxide, and ozone among Black children: A reanalysis of the AsthmaNet Best African American Response to Asthma Drugs trial. *The Journal of Allergy and Clinical Immunology*, 156(2), 330–338. <https://doi.org/10.1016/j.jaci.2025.04.009>
- Gómez, L.F., Kinnee, E.J., Holguin, F., & Clougherty, J.E. (2025). Reply [Letter]. *Journal of Allergy and Clinical Immunology*, 156(5), 1437–1438. <https://doi.org/10.1016/j.jaci.2025.08.010>
- Gómez, L.F., Kinnee, E., Kaufman, J.D., Young, M.T., Fitzpatrick, A.M., Phipatanakul, W., Mauger, D.T., McClure, L.A., Bilal, U., Holguin, F., & Clougherty, J.E. (2024). Modification of asthma treatment efficacy by healthcare access: A reanalysis of AsthmaNet Step-Up Yellow Zone Inhaled Corticosteroids to Prevent Exacerbations (STICS) clinical trial. *Respiratory Medicine*, 234, 107853. <https://doi.org/10.1016/j.rmed.2024.107853>
- Navas-Acien, A., Domingo-Relloso, A., Subedi, P., Riffo-Campos, A.L., Xia, R., Gómez, L., Haack, K., Goldsmith, J., Howard, B.V., Best, L.G., et al. (2021). Blood DNA methylation and incident coronary heart disease: Evidence from the Strong Heart Study. *JAMA Cardiology*, 6(11), 1237–1246.

Manuscripts Under Review or In Preparation

- Gómez, L.F., Lactaoen, K., Schreiber, A., Weissman, G.E., & Himes, B.E. Self-report versus neighborhood-level measures in models estimating asthma emergency visits. (Under review).
- Gómez, L.F., Lactaoen, K., Schreiber, A., Gleeson, P., & Weissman, G.E. Comparative effectiveness of monoclonal antibody therapy for asthma: a target trial emulation. (Under review).
- Gómez, L.F., Kinnee, E., Kaufman, J.D., Holguin, F., Young, M.T., & Clougherty, J.E. Associations between criteria air pollutants and asthma symptoms by eosinophilic phenotype and medication in a randomized controlled trial. (In preparation).
- Gómez, L.F., DeRoos, A., Kenyon, C., & Clougherty, J.E. Modifying effects of inhaled corticosteroids on associations between air pollutants and pediatric asthma in Philadelphia: a retrospective case-crossover analysis of electronic health records. (In preparation).

Conference Abstracts and Proceedings

11. Gómez, L.F., Lactaoen, K., Schreiber, A., Gleeson, P., & Weissman, G.E. (2025). Comparative effectiveness of asthma monoclonal antibody therapy in adults: An EHR-based propensity-score-matched retrospective cohort study. *American Journal of Respiratory and Critical Care Medicine*, 211(Abstracts), A5558. <https://doi.org/10.1164/ajrccm.2025.211.Abstracts.A5558>
12. Gómez, L.F., 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. *ISEE Conference Abstracts*, 2023(1). <https://doi.org/10.1289/isee.2023.MP-097>
13. Gómez, L.F., 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. *ISEE Conference Abstracts*, 2022(1).
14. Gómez, L.F., 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. *ISEE Conference Abstracts*, 2021(1).
15. Domingo-Relloso, A., Tellez-Plaza, M., Bozack, A., Gómez, L., Herreros, M., Devereux, R., Baccarelli, A., Umans, J., Howard, B., Zhao, J., et al. (2020). Common DNA methylation signatures of arsenic exposure and incident cardiovascular disease in the Strong Heart Study. *ISEE Conference Abstracts*, 2020(1).
16. Navas-Acien, A., Domingo-Relloso, A., Tellez-Plaza, M., Gómez, L., Herreros, M., Devereux, R.B., Baccarelli, A., Umans, J.G., Howard, B., Zhao, J., et al. (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.