ZAKARI LOWENTHAL BILLO

zlb2008@cumc.columbia.edu
(646) 858-5223
www.linkedin.com/in/zakaribillo/

EDUCATION

Columbia Mailman School of Public Health - New York, NY May 2026
MPH Candidate, Department of Epidemiology, Applied Biostatistics and Public Health Data Science
- GPA 3.97

The University of North Carolina at Chapel Hill - Chapel Hill, NC May 2024
Bachelor of Science, Chemistry
- GPA 3.63, Cum Laude

RELEVANT EXPERIENCE

Columbia Mailman School of Public Health – New York, NY May 2023 – July 2023
CDC John R. Lewis Public Health Scholar
- Completed a practicum experience with the Arthur Ashe Institute for Urban Health (AAIUH) at SUNY Downstate, focusing on community-based participatory research for the Barbershop Talk with Brothers and Heart of A Woman programs
- **Motivation:** Assess perceptions of community and individual needs and provide connections to medical care/info from partnering barbershops and salons
- **Approach:** This was the initial phase of a pilot program, and 12 iPad kiosks (Cabrini Technology) were installed in different barbershops/salons in Brooklyn (11225, 11226, and 11216 zip codes) to collect survey data
- **Analysis:** The dataset (n=333 individuals) was analyzed using Excel, and the initial proportion of responses by question was determined
- **Conclusion:** Initial findings suggested that the kiosk pilot program may sustainably allow AAIUH to provide community members access to care in nontraditional barbershops/salon settings
- Culminated in a poster presentation at the CDC Lewis/Ferguson Scholar showcase in Atlanta, GA

The Hill Group – Chapel Hill, NC January 2022 – August 2023
Undergraduate Researcher, The University of North Carolina at Chapel Hill
- Carried out complete syntheses and purifications of orphaned vinylcylcopropanes
- Handled many logistical needs of the lab, such as dish-washing, preparing essential reagents, and managing chemical and physical waste disposal, all of which ensured efficiency and facilitated cooperation in the lab

RELEVANT COURSEWORK

- Applied Regression I: Developed foundational proficiency in regression modeling techniques and statistical inference for continuous data analysis
- Analysis of Categorical Data: Specialized in analyzing categorical outcomes using logistic regression, contingency table methods, and nonparametric techniques for effective model interpretation
- Application of Epidemiologic Research Methods: Developed robust skills in designing studies and leveraged statistical analyses in SAS and R with public datasets like CDC NHANES
- Epidemiology II: Design and Conduct of Observational Studies: Acquired proficiency in DAGs for causal inference, observational study design, and confounding control
- 1st Course in Differential Equations: Developed expertise in solving systems of linear differential equations and applying matrix methods for advanced statistical modeling and dynamic systems analysis
- Intro to Biological Chemistry: Learned Python to model genes and proteins. Gained an understanding of bioinformatics techniques like AlphaFold 3 and statistical analysis of NGS data (RNA-seq, and PCR)

TECHNICAL SKILLS

- SAS - proficient
- R - moderate proficiency (glmm, epitools, tidyverse, tidymodels, rms)
- Python - moderate proficiency (numpy, pandas)
- Competent in synthesis (Glovebox trained), purification methods (chromatography, extractions, fractional distillation, recrystallization), and NMR (^{1}H, ^{13}C$\{^1$H$\}$, COSY, HMBC, HSQC analysis in MestreNova)

AWARDS

- CDC John R. Lewis Public Health Scholar
- 2023 ACS Undergraduate Organic Chemistry Awardee
- Billie and Tommie Hinton Summer Undergraduate Research Fellow
- Hayden B. Renwick Scholar