

Chiraag Gohel

Curriculum Vitae

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Research Statement

My research focuses on developing computational and statistical methods for analyzing high-dimensional omics data. I am particularly interested in creating robust tools and approaches that help researchers extract meaningful biological insights from complex molecular datasets. My work aims to address the analytical challenges posed by (multi)omics integration, with an emphasis on making these advanced methods accessible to the broader scientific community through open-source software implementations.

Education

The George Washington University Doctor of Philosophy in Biostatistics and Bioinformatics	2022 – Present
Carleton College Bachelor of Arts in Statistics	2016 – 2020

Research Experience

Graduate Research Assistant Computational Biology Institute, The George Washington University	2022 – Present
Research Software Engineer The Biostatistics Center, The George Washington University	2022 – 2024
Research Volunteer Laboratory of Neurogenetics, National Institute on Alcoholism and Alcohol Abuse	2022 – 2024
IRTA Postbac Research Fellow Laboratory of Neurogenetics, National Institute on Alcoholism and Alcohol Abuse	2020 – 2022

Publications

Patt, A., Pang, I., Lee, F., **Gohel, C.**, Fahy, Eoin., Stevens, V., Ruggieri, D., Moore, SC., and Mathé, EA. (2025). [metLinkR: Facilitating Meta-analysis of Human Metabolomics Data through Automated Linking of Metabolite Identifiers](#). *Journal of Proteome Research*.

Amuso, V. M., Haas, M. R., Cooper, P. O., Chatterjee, R., Hafiz, S., Salameh, S., **Gohel, C.**, Mazumder, M. F., Josephson, V., Kleb, S. S., Khorsandi, K., Horvath, A., Rahnavard, A., and Shook, B. A. (2024). [Fibroblast-mediated macrophage recruitment supports acute wound healing](#). *Journal of Investigative Dermatology*.

Smith, M. E., Chen, C. T., **Gohel, C. A.**, Cisbani, G., Chen, D. K., Rezaei, K., McCutcheon, A., and Bazinet, R. P. (2024). [Upregulated hepatic lipogenesis from dietary sugars in response to low palmitate feeding supplies brain palmitate](#). *Nature Communications*, 15(1):1-12.

Gao, C., **Gohel, C. A.**, Leng, Y., Ma, J., Goldman, D., Levine, A. J., and Penzo, M. A. (2023). [Molecular and spatial profiling of the paraventricular nucleus of the thalamus](#). *eLife*, 12:e81818.

Sambo, D., **Gohel, C.**, Yuan, Q., Sukumar, G., Alba, C., Dalgard, C. L., and Goldman, D. (2022). [Cell type-specific changes in Wnt signaling and neuronal differentiation in the developing mouse cortex after prenatal alcohol exposure during neurogenesis](#). *Frontiers in Cell and Developmental Biology*, 10:1011974.

Public Software

massSight ([GitHub](#))

Lead Developer and Maintainer

An R package for integrating and scaling LC-MS metabolomics data across studies. Features include data harmonization, batch effect correction, and multi-study integration tools.

R-cometsAnalytics ([GitHub](#))

Core Contributor

An R package for metabolomics data analysis in epidemiological studies.

metLinkR ([GitHub](#))

Contributor

An R package for linking metabolite identifiers across studies.

Conferences and Workshops

Presentations

Gohel, C. (2024). COMETS Analytics: An open-source tool for single and multi-cohort metabolomic analyses in epidemiological studies *CSHL Biological Data Science 2024*.

Rahnavard, A., and **Gohel, C.** (2023). Meta-analysis, biomarker discovery, and pathway enrichment analysis of metabolomics data. *ISMB 2023*.

Workshops

Gohel, C., Kerchner, D., and Gaylord, C. (2024). The Data Carpentries: Genomics Workshop. *Two-day workshop at the George Washington University*.

Gohel, C., Kerchner, D., and Gaylord, C. (2023). The Data Carpentries: Metagenomics Workshop. *Two-day workshop at the George Washington University*.

Rahnavard, A., and **Gohel, C.** (2023). Meta-analysis, biomarker discovery, and pathway enrichment analysis of metabolomics data. *Metabolomics 2023*.

Posters

Gohel, C., Rahnavard, A. (2025) “Automating Prior Elicitation for Metabolomics Data Analysis.” *GWSPH Research Day 2025*.

Gohel, C., Sayoldin B., and Rahnavard, A. (2024). massSight: an R package for integrating and scaling LC-MS metabolomics data across studies. *CSHL Biological Data Science 2024*.

Gohel, C., Pirani, P., Kamali, A., and Rahnavard, A. (2023). massSight: Metabolomics meta-analysis through multi-study data scaling, integration, and harmonization. *Metabolomics 2023*.

Chen, C., **Gohel, C.**, Yu, M., Lecaj, L., Haven, S. E., Wilhite, B., Hibbeln, J. R., and Goldman, D. (2023). Dietary intake varying in n-6 and n-3 PUFA regulate unique gene signatures in response to ethanol between male and female mice. *ISSFAL 2023*.

Sambo, D., **Gohel, C.**, Yuan, Q., and Goldman, D. (2021). Investigating the Effects of Prenatal Alcohol Exposure on the Developing Cortex Using Single Nucleus RNA Sequencing. *American College of Neuropsychopharmacology’s 60th Annual Meeting*.

Teaching

Teaching Assistant

2023 – 2024

The George Washington University, Washington DC

Fall 2024: PUBH 8885, Computational Biology

Fall 2023: PUBH 6886, Statistical and Machine Learning

Teaching Assistant

2021 – 2022

FAES at the NIH, Bethesda MD

Winter 2022: BIOF101, Introductory Coding Skills

Spring 2021: BIOF501, Introduction to R

Selected Fellowships and Awards

1st Place, GWSPH Research Day Department of Biostatistics and Bioinformatics Award 2025

The George Washington University

Co-Design of Trustworthy AI Systems (DTAIS) fellowship 2024

The George Washington University

GWSPH Fellowship in the Department of Biostatistics and Bioinformatics 2023

The George Washington University

Postbaccalaureate IRTA Fellowship 2020

National Institutes of Health

Positions and Memberships

Member

Metabolomics Society

Member

American Statistical Association

Member

ENAR

Member

COMETS Data Infrastructure Group

Member

American Society for Mass Spectrometry

Volunteer

The Carpentries