

# Noah Lorincz-Comi

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## Education

<b>PhD, Epidemiology &amp; Biostatistics</b> – Case Western Reserve University, USA (CWRU)	2019-Dec. 2023
<b>MSc, Psychiatric Research</b> (Top of class) – King's College London, UK (KCL)	2018-2019
<b>BA, Psychology</b> – Ohio University, USA (OHIO)	2014-2018

## PhD Dissertation: Develop statistical methods to study Alzheimer's disease risk

- **Aim 1:** Develop a bias-corrected multivariable Mendelian Randomization (MR) estimator and software
- **Aim 2:** Develop statistical and computational tools to perform genome-wide searches for causal genes
- **Aim 3:** Find genes whose expression in brain and heart tissues cause Alzheimer's Disease risk

## Statistical Software

- **simmr** (R) Simulates data for evaluating statistical methods in Mendelian Randomization
- **HORNET** (Python) Estimates causal regulatory networks of gene expression and disease
- **MRBEE** (Python & R) Performs bias-corrected multivariable Mendelian Randomization
- **spatialme** (R) Fits bias-corrected multivariable geographically weighted regression
- **sgmm** (R) Prepares longitudinal pharmacy records to be analyzed using growth mixture models
- **glmice** (R) Pools model fit diagnostics from logistic regression using multiple imputation

## Professional Experience

### Consulting

#### Statistical

- 1) OB/GYN Department, University Hospitals, Cleveland, OH – Clinical data analysis 2023 – Current
- 2) Cancer Support Community, Washington, DC – Insurance claims data analysis 2023 – Current
- 3) Dr. Gregory Cooper, University Hospitals, Cleveland, OH – Clinical data analysis 2023

#### Business

- 1) Bophana Audiovisual Arts Center, Phnom Penh, Cambodia – securing grant funding 2017

### Reviewer

- 1) (Academic journal) *BMC Medical Research Methodology* 2022 – Current
- 2) (Academic journal) *Nature: Scientific Reports* 2022 – Current
- 3) (Academic journal) *Cities & Health* 2023 – Current
- 4) (Undergraduate research grants) Summer research applications seeking \$3.5k (CWRU) 2022-2023
- 5) (Undergraduate research) Judge of 30+ posters of capstone work (CWRU) 2022–Current

### Undergraduate mentorship

- 1) Supporting 2 undergraduates in estimating risk of Alzheimer's from gut bacteria (CWRU) 2023 – Current
- 2) Research Sponsor for **BIOL 388S**, 3 credit hours (CWRU) 2023 – Current

## Scientific Publications

### Statistical method development

- **Lorincz-Comi et al. (2023)** An open-source tool to perform simulations in Mendelian Randomization
- **Lorincz-Comi et al. (2023)** HORNET: Statistical and computational tools for causal gene inference
- **Lorincz-Comi et al. (2023)** MRBEE: R and Python functionality for robust Multivariable MR
- **Lorincz-Comi et al. (2023)** MRBEE: A novel bias-corrected multivariable MR method
- Zhu, Yang, **Lorincz-Comi et al. (2023)** A New Method to Identify Gene-Environment Interactions
- **Lorincz-Comi et al. (2021)** Addressing uncertainty in census estimates

### *Applied work*

- Linz, **Lorincz-Comi** et al. (2023) Patient decisions regarding rescheduling postponed colonoscopies
- Lovell, **Lorincz-Comi** et al. (2023) Spatial Predictors of Rape: A Novel Spatial Regression Approach
- Lovell, McGuire, **Lorincz-Comi** et al. (2022) Examining Walking-Waiting Sexual Assaults
- **Lorincz-Comi** et al. (2021) Cardiometabolic risks of SARS-CoV-2 hospitalization using MR
- Min, Albert, **Lorincz-Comi** et al. (2021) Prenatal substance exposure and developmental trajectories
- **Lorincz-Comi** et al. (2019) Chronic disease treatment seeking and depression

### Grant, Awards and Honors

#### *Grants*

- **\$60k** T32 Grant, National Institutes of Health (CWRU) 2020-2022

#### *Awards*

- **£150** Sir Robin Murray Prize, Top of MSc Class (KCL) 2019
- **\$150** Student Research Fund (OHIO) 2018
- **\$250** David A Johnson Undergraduate Research Travel Award (OHIO) 2017
- **\$150** David A Johnson Undergraduate Research Travel Award (OHIO) 2017
- **\$150** Research Travel Fund, Center for Intl. Studies (OHIO) 2017
- **\$1,500** Provost Undergraduate Research Fund (OHIO) 2016
- **\$500** Undergraduate Research Travel Fund (OHIO) 2016

#### *Honors*

- **Featured** in an OHIO College of Arts & Sciences article for research achievement 2017
- *Above and Beyond Award*, Center for Intervention Research in Schools (OHIO) 2016

### Teaching Experience

- TA to **IBMS 450**, Fundamental Biostatistics to Enhance Rigour and Reproducibility (CWRU) 2022
- TA to **PQHS 431**, Statistical Methods in Biological and Medical Sciences I (CWRU) 2019
- TA to **GLC 1000**, The Global Experience, Global Leadership Center (OHIO) 2018

### Presentations

#### *American Society of Human Genetics*

- Washington, D.C. (2023, 2023), Los Angeles, CA (2022, 2022, 2022), Virtual (2021)

#### *International Genetic Epidemiology Society*

- Nashville, TN (2023, 2023), Paris, France (2022)

#### *Other*

- Cleveland Clinic (2023), NIH Trainee Session (Heart, Lung, & Blood Institute) (2022), Cohorts for Heart and Aging Research in Genomic Epidemiology (2022), CWRU Biomedical Graduate Student Symposium (2021), Francis Crick Center Mastership Conference in London, UK (2019), ABCT in New York, New York (2016), Center for School Mental Health in San Diego, CA (2016, 2016, 2016), OU Student Expo (2018, 2016, 2016), Advancing School Mental Health, New Orleans, LA (2015)

### Volunteering

- 1) Chair of the CWRU Biomedical Graduate Student Symposium, Cleveland, OH 25+ hrs
  - Lead Fundraising, Abstract, Judging, Website, Advertising, and Speaker Committees
- 2) Oasis Anti Human Trafficking, Mumbai, India 15 hrs
  - Assisted members of Oasis with administrative duties, lead sports activities with children
- 3) Appalachian Behavioral Healthcare Hospital, Athens, OH 20 hrs
  - Assisted staff with administrative duties, participate in sports activities with patients