

Rachel Hannah Tao, MPH

New York, NY 10021 | rachelhtao@gmail.com

Personal website: 12taor.github.io | linkedin.com/in/rachel-tao

EDUCATION

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

May 2021

Master of Public Health (MPH), Epidemiology, Certificate in Applied Biostatistics and Data Science

GPA: 4.0 **Awards:** Dean's Scholarship Merit Award Recipient

Thesis: Source-specific effects of PM_{2.5} pollution on emergency-department visits for myocardial infarction

Columbia University, Columbia College, New York, NY

May 2016

Bachelor of Arts (BA), Environmental Biology

GPA: 3.6 **Thesis:** Differences in Water-Use for Plant Species on New York Green Roofs

SKILLS

Programming languages and tools: R (intermediate+), SAS (intermediate), [Git](#) (basic)

Databases: MS Access (basic), SQL (intermediate)

Visualization and formatting: R ggplot2 (intermediate+), LaTeX (basic), QGIS (basic)

Languages: English (fluent/native), French (intermediate proficiency), Mandarin (basic proficiency)

PUBLIC HEALTH EXPERIENCE

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

Research Analyst

June 2020 - Present

- Collaborate with diverse 9-person team of epidemiologists, biostatisticians, and computer scientists for development of novel machine learning methods to assess environmental mixtures as health exposures
- Apply PCA and other dimensionality-reduction methods to evaluate novel method, Principal Component Pursuit
- Analysis of 2 EPA air pollution datasets up to 2400 observations in size as well as emergency department admissions data for more than 6000 myocardial infarction events in NYC

COVID-19 Student Service Corps (CSSC)

February 2021 – April 2021

Co-Lead, Vaccination Appointment Community Outreach Project

- Established standard operating procedure for student effort to set up vaccination appointments for Washington Heights community members at New York Presbyterian Hospital
- Managed more than 30 volunteers through weekly check-in meetings and individual outreach
- Collaborated with stakeholders at New York Presbyterian to keep our procedures up-to-date with constant changes in vaccine eligibility status

Citizen Public Health Literacy (CIPHER)

June 2020 – May 2021

Community Needs Assessment and Outreach Task Group Member

- Outreach with 7 community-based organizations (CBOs) to address emerging needs from COVID-19, including connecting seniors to health resources, solutions for outdoor youth physical activity & community fridges for food security
- Developed grant writing and application strategy with two participating CBOs including applications to the New York Foundation and the Manhattan Community Awards Program
- Reviewed 6 lessons as part of online public health curriculum for accuracy and cultural competence

RELEVANT EXPERIENCE

Department of Pediatrics, Columbia University Irving Medical Center, New York, NY

May 2017-June 2019

Research and Fellowship Coordinator

- Coordinated study subject visits for 3 studies and maintained data and regulatory information for ongoing research
- Editorial assistance for 6 manuscripts, 3 abstracts, and 1 NIH grant proposal (publications list below)
- Managed fellowship application process and documented research accomplishments of 7 fellows for program reporting
- Provided support to clinical staff as a Medical Scribe for up to 20 patients per week

Greenbelt Native Plant Center, NYC Department of Parks and Recreation

August-December 2016

Research Analyst

- Designed and managed greenhouse experiment to measure water use in 48 plant species commonly used on green roofs
- Analyzed data in R to detect species-level differences in water use and created data visualizations to communicate results
- Recommended 18 species for green roofs in the form of a research report to NYC Department of Parks and Recreation

TEACHING AND MENTORSHIP

Department of Biostatistics, Mailman School of Public Health New York, NY

September 2020 – December 2020

Teaching Assistant, Applied Regression I

Provide feedback on students' course deliverables, hold weekly office hours, and lead coding tutorials in SAS

Crime Victims Treatment Center, New York, NY

October 2018 – October 2020

Mentor for Crisis Counselor Trainees

Volunteer Rape Crisis and Domestic Violence Counselor at Mount Sinai West and Morningside Emergency Departments

PUBLICATIONS (co-author)

Weiner A, Cowell A, McMahon DJ, **Tao R**, Zitsman J, Oberfield SE, Fennoy I. The effects of adolescent laparoscopic adjustable gastric band sleeve gastrectomy on markers of bone health and bone turnover. *Clinical Obesity*, [2020](#).

Pereira-Eshraghi CF, Chiuzaan C, Zhang Y, **Tao RH**, McCann M, Neugut D, Printz A, Fennoy I, Cree-Green M, Oberfield SE, Sopher AB. Obesity and insulin resistance, not polycystic ovary syndrome, are independent predictors of bone mineral density in adolescents and young women. *Horm Res Paediatr*, [2020; 1-7](#).

Baer TG, Agarwal S, Chen S, Chiuzaan C, Sopher AB, **Tao R**, Hassoun A, Shane E, Fennoy I, Oberfield SE, Vuguin PM. Deficits in bone geometry in growth hormone-deficient prepubertal boys revealed by high-resolution peripheral quantitative computed tomography. *Horm Res Paediatr*, [2019;92\(5\):293-301](#).

Witchel SF, Burghard AC, **Tao RH**, Oberfield SE. The diagnosis and treatment of PCOS in adolescents: an update. *Current Opinion* 2019;[31\(4\):562-569](#).

Oberfield SE, **Tao R**, Witchel SF. Present knowledge on the etiology and treatment of adrenarche. *Pediatric Endocrinol Rev* 2018;[15\(3\):244-254](#).

Ibañez L, Oberfield SE, Witchel S...**Tao R**, ...Lee PA. An International Consortium Update: Pathophysiology, diagnosis, and treatment of polycystic ovarian syndrome in adolescence. *Horm Res Paediatr*, 2017;[88\(6\):371-395](#).

OP-ED

Tao R. Opinion: A side effect of COVID-19 could be weaker civil liberties. [City Limits](#), July 4, 2020.