



# Kathleen Chen, MPH

## Current Position

Associate Health Scientist I

## Discipline Areas

- > Environmental Health Sciences
- > Epidemiology
- > Human Health Risk Assessment

## Years' Experience

1

## Joined Cardno

2021

## Education

- > MPH, Environmental Health Sciences – Molecular Epidemiology, Columbia University, 2021
- > BS, Biomolecular Science, University of Michigan, 2019

## Summary of Experience

Ms. Kathleen Chen is an Associate Health Scientist with Cardno ChemRisk. She received her Master of Public Health (MPH) in Environmental Health Sciences with a Certificate in Molecular Epidemiology from the Columbia University Mailman School of Public Health in 2021. She also completed her Bachelor of Science in Biomolecular Science with a minor in Entrepreneurship from the University of Michigan in 2019. Her research and academic experiences have centered on molecular biology, epidemiology, risk assessment, toxicology, and data analysis.

For her master's capstone project, Ms. Chen conducted a comprehensive literature review collating the qualitative and quantitative health benefits of installing green roofs and urban green spaces in developing urban regions. Over the course of her graduate career, she also conducted research on determining windows of susceptibility for neurodevelopmental gene expression in the perinatal period upon exposure to air pollution. Her prior undergraduate research experience also includes early life exposure work in which she analyzed the impact of perinatal phthalate exposure on metabolic gene methylation.

Since joining Cardno ChemRisk, Ms. Chen has provided litigation support related to various occupational and environmental exposures such as asbestos and talc. In addition, she has also been involved in epidemiological projects assessing exposure to e-cigarettes, nicotine, and alcohol and resultant health endpoints.

## Significant Projects

### Epidemiology

Participated in a comprehensive literature review of clinical and behavioral effects of e-cigarette and oral nicotine product usage. Consolidated evidence for the review with regard to product use characteristics, clinical effects, behavioral effects, and study quality to aid in the development of final client recommendations.

Assisted in a comprehensive literature review and synthesis of available epidemiological data on the potential association between alcohol consumption at levels recommended by the Scientific Report of the 2020 USDA Dietary Guidelines and all-cause mortality as a health endpoint of interest.

### Litigation Support

Conducted literature and case material review in support of cases involving alleged exposure to asbestos and talc. Reviewed and summarized case materials in support of opinion development for expert reports, depositions, and trials.

## Previous Research Experience

Graduate Research Assistant – Columbia University Mailman School of Public Health

Assessed for critical windows of neurodevelopmental vulnerability as a result of exposure to PM<sub>2.5</sub> and NO<sub>2</sub> in the perinatal developmental period. Analyses were conducted in R using a distributed lag model. Neurodevelopmental vulnerability was characterized using protein and methylation levels of Brain-derived neurotrophic factor (BDNF) in the sample cohort.

Undergraduate Research Assistant – University of Michigan

Assisted in wet bench research to determine the impact of maternal exposure to endocrine disrupting chemicals, specifically phthalates, on epigenetic alterations affecting fetal development and metabolic homeostasis. These epigenetic alterations included variances in DNA methylation of target genes of peroxisome proliferator-activated receptors (PPARs).

- > Delta Omega Public Health Honor Society (Inducted 2021)
- > Joseph H. Graziano Award for Academic Excellence in Environmental Health Sciences (April 2021)

## Professional Honors/Awards

## Peer-Reviewed Papers

- > Neier, K., Montrose, L., Chen, K., Malloy, M., Jones, T., Svoboda, L., Harris, C., Song, P., Pennathur, S., Sartor, M., Dolinoy, D. 2020. Short- and long-term effects of perinatal phthalate exposures on metabolic pathways in the mouse liver. *Environmental Epigenetics*. 6(1): 1-17.
- > Jansen, E., Peterson, K., Lumeng, J., Kaciroti, N., LeBourgeois, M., Chen, K., Miller, A. 2019. Associations between Sleep and Dietary Patterns among Low-Income Preschoolers. *Journal of the Academy of Nutrition and Dietetics*. 119(7): 1176-1187.

## Publications

## Oral Presentations

- > Chen, K., Steiger, B., Hoffman, C., Kimball, S. 2021. Environmental, health and economic benefits of urban greening and cool roofs in India. Presented at the 17<sup>th</sup> International Conference on Urban Health, virtual. July 6-8.

## Presentations