

# Integrating Environmental Data With Other Omics for Cancer Epidemiology

## Agenda

**Day 1: Tuesday, February 14, 2023**

*All times listed are Eastern Standard Time*

**11:00 a.m. Setting the Stage**

Trevor Archer, Ph.D., Deputy Director, National Institute of Environmental Health Sciences (NIEHS);  
National Institutes of Health (NIH) Distinguished Investigator

Gary Ellison, Ph.D., M.P.H., Deputy Director, Division of Cancer Control and Population Sciences, National  
Cancer Institute (NCI)

**11:10 a.m. Purpose and Outcomes**

Kimberly McAllister, Ph.D., NIEHS

Leah Mechanic, Ph.D., M.P.H., NCI

**11:20 a.m. Session I: Specific Cancer Considerations**

**Moderator:** Ulrike Peters, Ph.D., M.P.H., University of Washington, Fred Hutchinson Cancer Center

**11:20 a.m. Cancer Susceptibility and Environmental Exposures: Why Study Designs Matter**

Mary Beth Terry, Ph.D., Columbia University, Mailman School of Public Health

**11:50 a.m. Disentangling the Aetiological Pathways Between Body Mass Index and Site-Specific Cancer Risk  
Using Tissue-Partitioned Mendelian Randomization**

Genevieve Leyden, Ph.D., University of Bristol, Bristol Medical School

**12:20 p.m. Session I Panel Discussion and Audience Questions**

Panelists:

- Catherine Metayer, M.D., Ph.D., University of California, Berkeley, School of Public Health
- Sophia Wang, Ph.D., City of Hope Comprehensive Cancer Center
- Peter Kraft, Ph.D., Harvard University, T.H. Chan School of Public Health
- Cathrine Hoyo, Ph.D., North Carolina State University

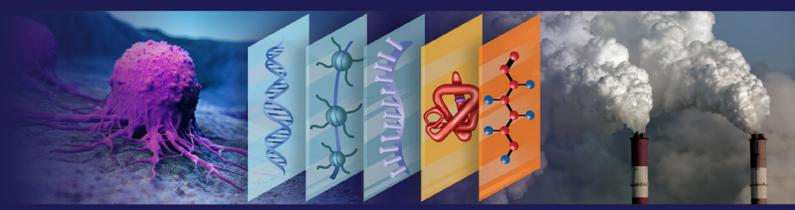
**1:05 p.m. Lunch Break**

**1:35 p.m. Session II: Computational Approaches**

**Moderator:** Andrea Baccarelli, M.D., Ph.D., Columbia University, Mailman School of Public Health

**1:35 p.m. Statistical Approaches for Integrating Environmental and Omics Data in Cancer-  
Epidemiology Studies**

James Gauderman, Ph.D., University of Southern California, Keck School of Medicine



**2:05 p.m. Longitudinal Multi-Omic Characterization of a Community Cohort After Chemical Exposures From Hurricane Harvey**

Cristian Coarfa, Ph.D., Baylor University, Baylor College of Medicine

**2:35 p.m. Break**

**2:50 p.m. Session II Panel Discussion and Audience Questions**

Panelists:

- Marylyn Ritchie, Ph.D., University of Pennsylvania, Perelman School of Medicine
- Nilanjan Chatterjee, Ph.D., Johns Hopkins University, Bloomberg School of Public Health
- Marina Sirota, Ph.D., University of California, San Francisco, Bakar Computational Health Sciences Institute

**3:35 p.m. Open Discussion**

**4:00 p.m. Day 1 Closing**

Leah Mechanic, Ph.D., M.P.H., NCI

**Day 2: Wednesday, February 15, 2023**

**11:00 a.m. Day 2 Introduction**

Kimberly McAllister, Ph.D., NIEHS

**11:05 a.m. Session III: Integration of Environmental Data With Other Data Types**

**Moderator:** Gary Miller, Ph.D., Columbia University, Mailman School of Public Health

**11:05 a.m. Dose Versus Burden in Exposome Research: Translation of Integrative Omics of Model Systems to Environmental Epidemiology in Cancer Research**

Dean Jones, Ph.D., Emory University, Winship Cancer Institute

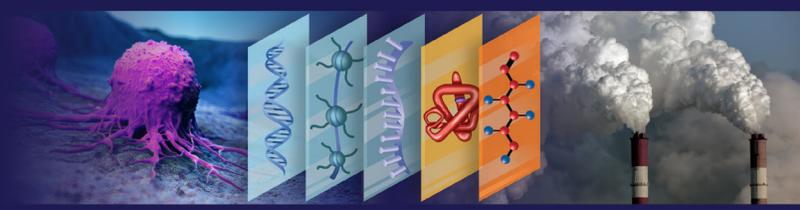
**11:35 a.m. Examples of Omics Integration in Studies of the Environment on Human Health**

Carmen Marsit, Ph.D., Emory University, Rollins School of Public Health

**12:05 p.m. Session III Panel Discussion and Audience Questions**

Panelists:

- Scarlett Gomez, Ph.D., M.P.H., University of California, San Francisco, Helen Diller Family Comprehensive Cancer Center
- Thomas Metz, Ph.D., Pacific Northwest National Laboratory
- Douglas Walker, Ph.D., Emory University, Rollins School of Public Health
- Ivana Yang, Ph.D., University of Colorado, Anschutz Medical Campus
- Nathaniel Rothman, M.D., M.P.H., M.H.S., NCI



**12:50 p.m. Lunch Break**

**1:15 p.m. Session IV: Experimental Models and Functional Approaches**

**Moderator:** Stephen Montgomery, Ph.D., Stanford University

**1:15 p.m. Introductory Remarks**

Stephen Montgomery, Ph.D., Stanford University

**1:25 p.m. Mechanism of Action and Inflammatory Axis for Air Pollution Induced Non-Small Cell Lung Cancer**

William Hill, Ph.D., The Francis Crick Institute

**1:55 p.m. Deciphering Mechanisms Through Which Environmental Risk Factors Mediate Colorectal Cancer Risk Through Weighted Gene Co-Expression Networks**

Matthew Devall, Ph.D., University of Virginia

**2:25 p.m. Session IV Panel Discussion and Audience Questions**

Panelists:

- David Reif, Ph.D., NIEHS
- Rebecca Fry, Ph.D., University of North Carolina at Chapel Hill, Gillings School of Global Public Health
- Francesca Luca, Ph.D., Wayne State University
- Justin Colacino, Ph.D., University of Michigan, School of Public Health

**3:10 p.m. Break**

**3:30 p.m. Closing Session: Integration of All Four Themes and Future Directions**

**3:30 p.m. Summary**

Chirag Patel, Ph.D., Harvard University, Harvard Medical School

**3:50 p.m. Final Open Discussion**

**Moderator:** Kari Nadeau, M.D., Ph.D., Harvard University, T.H. Chan School of Public Health

**4:30 p.m. Closing Remarks**

Kimberly McAllister, Ph.D., NIEHS

Leah Mechanic, Ph.D., M.P.H., NCI