SPEAKER BIOGRAPHIES
Sessions 2 & 3 — Air Pollution & Mechanisms of Disease

Yang Liu, PhD
Gangarosa Distinguished Professor & Chair, Dept. of Environmental Health
Rollins School of Public Health, Emory University
Leads a satellite remote sensing group modeling air pollution and wildfire health impacts; NASA Terra MISR and MAIA science team member.

Kai Chen, PhD
Associate Professor; Faculty Director, Center on Climate Change & Health
Yale School of Public Health
Research links wildfire smoke $PM_{2.5}$ to cardiovascular mortality, heart failure, and stroke in large U.S. Medicare.

Nikolaos Mihalopoulos, PhD
Research Director, IERSD; Professor of Environmental Chemistry
National Observatory of Athens (NOA); University of Crete
Among Europe's leading wildfire atmospheric chemist; 400+ publications on aerosol physicochemistry and wildfire impacts on Mediterranean air quality and climate.

Alison G. Lee, MD, MS
Vice Chair of Research and Faculty Affairs
Associate Professor & Associate Division Chief, Pulmonary Medicine
Icahn School of Medicine at Mount Sinai
Her work on household air pollution and lung function in Ghana has established key evidence on biomass burning and respiratory trajectories from in utero through childhood.

Alexandra Noël, PhD
Associate Professor, Comparative Biomedical Sciences
Louisiana State University School of Veterinary Medicine
Inhalation toxicologist using physiologically relevant in vitro and in vivo models to investigate differential cardiopulmonary toxicity of wildfire smoke.

Shuo Xiao, MBBS, PhD
Associate Professor, Pharmacology & Toxicology
Ernest Mario School of Pharmacy, Rutgers University / EOHSI
His current research includes characterizing how wildfire-emitted particulate matter disrupts ovarian function through aryl hydrocarbon receptor activation.

Vasilis Vasiliou, PhD
Susan Dwight Bliss Professor & Chair, Dept. of Environmental Health Sciences
Yale School of Public Health
Integrates exposomics and metabolomics to map how wildfire chemical complexity translates to human disease.

Zhanghua Chen, PhD
Assistant Professor, Division of Environmental Health
Keck School of Medicine, Uni. of Southern California
Multi-omics epidemiologist linking wildfire smoke and air pollution to cardiometabolic dysfunction; studies HEPA filtration as a mitigation strategy.

SPEAKER BIOGRAPHIES
Sessions 4 & 5 — Exposomics, Remediation & Carbonaceous Aerosols

Junfeng (Jim) Zhang, PhD
Professor of Global and Environmental Health
Nicholas School of the Environment & DGHI, Duke University
AAAS Fellow who pioneered HEPA filtration health studies; leading ongoing health follow-up studies of Maui and Los Angeles wildfire survivors.

Mohammed Baalousha, PhD
Professor of Environmental Nanoscience
Arnold School of Public Health, University of South Carolina
Leading expert on the environmental fate and health effects of incidental nanomaterials, with pioneering discoveries showing that wildland-urban interface fires release metal(loid)-bearing nanoparticles.

Rawad Saleh, PhD
Associate Professor, Environmental, Civil & Mechanical Engineering
University of Georgia
Investigates how combustion conditions in wildland fires determine the chemical composition, optical properties, and toxicity of smoke aerosols.

Sotiris E. Pratsinis, PhD
Professor of Process Engineering & Materials Science
ETH Zurich, Switzerland
Fellow of the Combustion Institute; pioneer of flame aerosol science providing understanding of carbonaceous particle formation, aging, and climate impact.

Georgios A. Kelesidis, PhD
Assistant Professor, Faculty of Aerospace Engineering Adjunct Faculty, Rutgers SPH
Delft University of Technology, the Netherlands
Studies the climate and public health impacts of carbonaceous aerosols. A Forbes 30 Under 30, his work bridges combustion physics, aerosol measurement, and large-scale atmospheric transport modeling.

Omowunmi 'Wunmi' Sadik, PhD
Distinguished Professor & Vice Provost for Faculty Affairs
New Jersey Institute of Technology (NJIT)
Fellow of the Royal Society of Chemistry and National Academy of Inventors; 200+ publications and 5 patents on biosensors, sustainable nanotechnology, and environmental sensing.

Jason C. White, PhD
Director
Connecticut Agricultural Experiment Station (CAES)
Authority on nano-enabled agriculture, PFAS phytoremediation, and contaminant fate in soils and water.

Robert J. Laumbach, MD, MPH, CIH
Associate Professor, Dept. of Environmental & Occupational Health and Justice
Rutgers School of Public Health / EOHSI
Investigates how traffic air pollutants interact with psychosocial stress to create cardiovascular and respiratory disparities in NJ environmental justice communities.

1st National Symposium on Wildfires and Their Impact on the Environment and Health

May 6, 2026 · 8:00 AM – 5:30 PM
Richard Weeks Hall of Engineering, Rutgers University · Piscataway, NJ

CO-ORGANIZERS

Nanoscience & Advanced Material Center (NAMC) | Rutgers Health Environmental and Occupational Health Sciences Institute | Harvard Medical School | UL Research Institutes | Chemical Insights

SCIENTIFIC ORGANIZING COMMITTEE

Philip Demokritou, PhD
Henry Rutgers Chair & Professor, Rutgers School of Public Health, Director, Rutgers NAMC
Leading expert on the health impacts of environmental particles and advanced materials. Over 20+ years at Harvard and Rutgers, he has led transdisciplinary centers examining emerging exposures—such as wildfire particles, micronanoplastics, and engineered nanomaterials—across the exposure–disease continuum.

José G. Cedeño-Laurent, PhD
Assistant Professor, Dept. of Environmental & Occupational Health and Justice — Rutgers School of Public Health / EOHSI
Researcher in exposure assessment, he has led wildfire smoke characterization during both the 2023 Canadian and 2025 LA fires.

Reynold Panettieri Jr., MD
Vice Chancellor for Translational Medicine & Science; Director, RITMS; Director, NJ ACTS — Rutgers Robert Wood Johnson Medical School
Recognized for landmark research on airway smooth muscle biology and lung inflammation in asthma and COPD.

Yohannes Tesfaigzi, PhD
Professor of Medicine, Pulmonary and Critical Care Medicine — Brigham and Women's Hospital / Harvard Medical School
World-renowned expert on the molecular mechanisms of airway remodeling, mucus overproduction, and COPD pathogenesis.

Shuo Xiao, MBBS, PhD
Associate Professor, Pharmacology & Toxicology — Ernest Mario School of Pharmacy, Rutgers University / EOHSI
Pioneered ovary-on-a-chip platforms to study how environmental contaminants impair female fertility.

Christa Wright, PhD
Director, Center for Toxicology & Human Health — UL CIRI
Leads advanced aerosol exposure platforms to link wildfire and consumer product emissions to adverse respiratory outcomes.

Mark Wilson, PhD
Director, Center for Analytical & Exposure Science — UL CIRI
Develops multi-route wildfire exposure models and analytical methods spanning particulate matter, VOCs, metals, and PFAS for health risk assessment.

SPONSORS

NJacts — New Jersey Alliance for Clinical and Translational Science | Rutgers Health School of Public Health | Rutgers Health Center for Environmental Exposures and Disease | Rutgers Health Office of Research | Rutgers–New Brunswick School of Engineering

MORNING PROGRAM

7:30–8:30 AM ☕ *Registration & Coffee*

8:30–8:35 Welcome and Charge
Dr. Philip Demokritou
On behalf of Scientific Organizing Committee

8:35–8:45 Welcome Remarks
Dr. Michael Zwick
VP for Research, Rutgers University
Dr. Perry Halkitis
Dean, Rutgers School of Public Health

8:45–9:00 Opening Remarks
Dr. Erik Svendsen · CDC Director, Division of Environmental Health Science and Practice

KEYNOTE ADDRESSES

9:00–9:15 **Dr. Kyle Walsh** · Director, NIH-NIEHS

9:15–9:30 **Dr. Gustavo Matute-Bello**
Lung Division Director, NHLBI

9:30–10:00 **Dr. Jonathan Samet**
University of Colorado Boulder
"Epidemiology and Wildfires: What Are the Questions and What Are the Answers?"

SESSION 1: Wildfires and Impact on Population Health
Chair: Dr. Yohannes Tesfaigzi · Harvard University

10:00–10:10 **Dr. Alika Maunakea** · University of Hawaii
"Hidden in the Ash: Heavy Metal Exposure and Lung Function After the Maui Wildfires"

10:10–10:20 **Dr. Ruben Juarez** · University of Hawaii
"Beyond Exposure: Mental, Physical, and Social Determinants of Health After the Maui Wildfires"

10:20–10:35 **Dr. Amy Padula** · UCSF
"Wildfire Smoke Exposure and Pregnancy Outcomes: Insights from California"

10:35–10:50 **Dr. Stefanos Kales** · Harvard University
"Sudden Cardiac Death in US Firefighters: State of the Science"

10:50–11:05 **Dr. Audrey Gaskins** · Emory University
"Wildfire Smoke and Human Fertility"

11:05–11:15 *Questions & Answers*

11:15–11:30 ☕ *Coffee Break ·*
Poster Flash Talks (90 sec, 1 slide each)

SESSION 2: Wildfires and Impact on Air Pollution
Chair: Dr. Mark Wilson · UL Chemical Insights Research Institute

11:30–11:45 **Dr. Yang Liu** · Emory University
"The Multi-faceted Health Impact of Wildfires"

11:45–12:00 **Dr. Kai Chen** · Yale University
"Wildfire Smoke as a Cardiovascular Threat: Cumulative Exposure and Compound Events"

12:00–12:15 **Dr. Nikos Mihalopoulos**
National Observatory of Athens, Greece
"Impact of Wildfires on Air Quality, Human Health, and Climate in Southern Europe"

12:15–12:25 *Questions & Answers*

AFTERNOON PROGRAM

12:25–1:35 PM 🍴 *Lunch ·Poster Presentations*

SESSION 3: Wildfires and Mechanisms of Disease
Chair: Dr. Christa Wright · UL Chemical Insights Research Institute

1:35–1:50 **Dr. Alison Lee** · Mount Sinai Medical Center
"Biomass Burning and Life Course Health Trajectories"

1:50–2:05 **Dr. Alexandra Noël** · Louisiana State University
"Beyond the Soot: Differential Cardiopulmonary Toxicity of Wildfire Smoke in Mice"

2:05–2:20 **Dr. Shuo Xiao** · Rutgers University
"Female Reproductive Impact of Wildfire Emitted Particulate Matter"

2:20–2:30 *Questions & Answers*

SESSION 4: Exposomics and Remediation
Chair: Dr. José G. Cedeño-Laurent ·Rutgers School of Public Health

2:30–2:45 **Dr. Vasilis Vasiliou** · Yale University
"Can Exposomics Map the Chemical Complexity of Wildfire Emissions and Health Outcomes?"

2:45–2:55 **Dr. Zhanghua Chen** · Univ. of Southern California
"Wildfire Smoke and Cardiometabolic Dysfunction: Can Indoor HEPA Filtration Reduce Health Risk?"

2:55–3:05 **Dr. Jim Zhang** · Duke University
"HEPA Use During Wildfires: Does it Improve Health?"

3:05–3:20 **Dr. Mohammad Baalousha** · Univ. of South Carolina
"Fires at the Wildland-Urban Interface Transform Metal(loid)s to More Toxic Forms"

3:20–3:30 *Questions & Answers*

3:30–3:45 ☕ Coffee Break

SESSION 5: Wildfires and Climate — Lessons from Carbonaceous Aerosol Sources
Chair: Dr. Nikolaos Mihalopoulos ·National Observatory of Athens, Greece

3:45–4:00 **Dr. Rawad Saleh** · University of Georgia
"Combustion Conditions in Wildland Fires Affect Smoke Production, Chemical Composition, and Toxicity"

4:00–4:10 **Dr. Sotiris Pratsinis** · ETH Zurich
"Combustion Generated Carbonaceous Aerosols and Their Impact on Air Quality and Climate"

4:10–4:20 **Dr. George Kelesidis** · Delft University of Technology
"The Climate Impact of Carbonaceous Aerosol Emissions from the 2023 Canadian Wildfires"

4:20–4:30 *Questions & Answers*

PANEL DISCUSSION
Research Needs and the Way Forward

4:30–5:30 *Chair*: **Dr. Michel Boufandel** · NJIT
- **Dr. Yohannes Tesfaigzi** · Harvard Medical School
- **Dr. Christa Wright** · UL Research Institutes
- **Dr. Gustavo Matute-Bello** · NHLBI
- **Dr. Omowunmi Sadik** · NJIT
- **Dr. Erik Svendsen** · CDC
- **Dr. Jason White** · Connecticut Agricultural Experiment Station
- **Dr. Robert Laumbach** · Rutgers SPH / EOHSI
- **Dr. Mark Wilson** · UL Research Institutes

5:30 PM *Adjourn*

SPEAKER BIOGRAPHIES

Session 1 — Wildfires and Impact on Population Health

Kyle Walsh, PhD
Director, NIEHS
National Institutes of Health (NIH)
Seventh NIEHS Director and neuroepidemiologist studying how genetic, epigenetic, and environmental factors drive brain cancer risk and aging.

Erik R. Svendsen, PhD
Director, Div. of Environmental Health Science & Practice
CDC, National Center for Environmental Health
Leads CDC programs on air quality, lead poisoning prevention, and environmental disaster health response across the United States.

Gustavo Matute-Bello, MD
Acting Director, Division of Lung Diseases
NHLBI, National Institutes of Health
Shapes NHLBI lung and sleep research strategy; pulmonologist whose work focuses on cellular mechanisms of acute lung injury and alveolar repair.

Jonathan M. Samet, MD, MS
Professor of Epidemiology & Environmental Health
Colorado School of Public Health, CU Anschutz
National Academy of Medicine member; decades of landmark research on wildfire smoke, fine particles, radon, and tobacco health risks.

Alika K. Maunakea, PhD
Associate Professor, Anatomy, Biochemistry & Physiology
John A. Burns School of Medicine, UH Mānoa
Native Hawaiian epigeneticist investigating gene–environment interactions underlying cardiometabolic disparities and Maui wildfire heavy metal exposures.

Ruben Juarez, PhD
HMSA Distinguished Endowed Professor, Economics & UHERO
University of Hawai'i at Mānoa
Co-director of the Maui Wildfire Exposure Study; uses health economics and community networks to document the long-term health impacts of the Lahaina fire.

Amy M. Padula, PhD
Associate Professor, OB/GYN & Reproductive Sciences
Reproductive Health & the Environment, UCSF
Environmental perinatal epidemiologist whose NIEHS-funded research links wildfire smoke exposure during pregnancy to preterm birth and birth defects in California.

Stefanos N. Kales, MD, MPH
Professor of Medicine
Harvard Medical School
International authority on firefighter cardiovascular health with 250+ publications; recipient of occupational medicine's Kehoe and Harriet Hardy Awards.

Audrey J. Gaskins, PhD
Associate Professor of Epidemiology
Rollins School of Public Health, Emory University
Reproductive and environmental epidemiologist examining how wildfire smoke and air pollution impair male and female fertility across multiple cohorts.

1st National Symposium on Wildfires Smoke & Health
May 6, 2025 · Rutgers University, Richard Weeks Hall