



Center for PFAS and Cancer (CPAC) Joint Virtual Symposium

March 6 - 8, 2024

GEORGETOWN
UNIVERSITY

Lombardi Comprehensive
Cancer Center



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SYMPOSIUM EVENT DETAILS

The CPAC Center at Georgetown University is hosting a joint symposium with consortium institutions. The symposium is open to all research and education community members interested in learning about PFAS toxicity, cancer, and mechanisms.

SYMPOSIUM OBJECTIVES

The symposium aims to promote collaboration and connections among researchers, educators, partners, stakeholders, and communities within and beyond the Washington, D.C., catchment area, focusing on the critical issue of PFAS (per- and poly-fluoroalkyl substances) toxicity, cancer risks, and related concerns. The event addresses a wide range of topics, including PFAS-related cancer risks, toxicity, mechanisms, detection, and remediation of PFAS, biomarkers of exposure, and intervention and community engagement strategies. Furthermore, the symposium prioritizes promoting prevention strategies and enhancing community health, specifically by addressing the significant impact of PFAS exposure on cancer.

SYMPOSIUM SESSIONS

Scan for link to zoom meeting

Session 1: PFAS: Cancer Risks, Toxicity, and Mechanisms.

Session 2: PFAS: Detection and Remediation.

Session 3: PFAS: Public Health and Policy.



SYMPOSIUM AGENDA

DAY 1: WEDNESDAY, MARCH 6

12.00 to 12.20 pm: **Introductory Remarks** by Dr. Sivanesan Dakshanamurthy, PhD., MBA., Professor of Oncology, and Director, NCI Chemical Biology Consortium Center at Georgetown University.

Session 1: PFAS: Cancer Risks, Toxicity, and Mechanisms

Moderators:

Dr. Benjamin Tycko, MD., PhD., Member, HMH Center for Discovery & Innovation (HMH-CDI), New Jersey.

Dr. Avi Rosenberg, MD PhD., Assistant Professor, Johns Hopkins University Medicine.

Dr. Moshe Levi, MD., Professor & Chief Scientific Officer, Georgetown University Medical Center.

Dr. Marcin Iwanicki, PhD., Assistant Professor, Stevens Institute of Technology.

Dr. Eric Glasgow, PhD., Director, Zebrafish Shared Resources. Georgetown University Medical Center.

12.25 - 12.35 pm: Brief Session Introduction

12.35 – 12.55 pm: Dr. Sivanesan Dakshanamurthy, PhD, MBA., Georgetown University Medical Center.
Title: Dose-Dependent Toxicity and Carcinogenicity Profiling of PFAS Mixtures with a New Hybrid Neural Network, Mathematical, and Pathophysiology Framework.

12.55 – 1.15 pm: Dr. Eric Glasgow, PhD., Director, Zebrafish Shared Resources. Georgetown University Medical Center.
Title: Zebrafish xenograft models for evaluation of PFAS mixture toxicity and carcinogenicity.

1.15 – 1.35 pm: Gary Kupfer, MD., Pediatric Medical Oncology, Georgetown University Medical Center.
Title: DNA Damage Response and PFAS

1.35 – 1.55 pm: Moshe Levi, MD., Professor & Chief Scientific Officer, Georgetown University Medical Center.
Title: Renal tubular effects of PFAS compounds

Break for 5 minutes

2.00 – 2.20 pm: Dr. Anton Wellstein, MD., PhD., Professor, Georgetown University Medical Center.
Title: Detection of cellular targets of malignant transformation by PFAS from cell-free methylated DNA in blood

2.20 – 2.40 pm: Dr. MaryBeth Martin, PhD., Professor of Oncology, Georgetown University Medical Center.
Title: PFAS, Metals/metalloids and nuclear receptors.

2.40 - 3.00 pm: Dr. Benjamin Tycko, MD., PhD., Member, HMH Center for Discovery & Innovation (HMH-CDI), New Jersey; Dr. Marcin Iwanicki, PhD., Assistant Professor, Stevens Institute of Technology.
Title: A pilot study of epigenetic effects of PFOS on cancer risk loci.

3.00 – 3.20 pm: Dr. Alvin MakohonMoore, PhD., Assistant Member, HMH Center for Discovery & Innovation (HMH-CDI), New Jersey.
Title: PFAS and cellular dynamics.

3.20 – 3.40 pm: Dr. Woo Lee, PhD. Chair, Department of Chemistry and Chemical Biology, Stevens Institute of Technology.
Title: PFAS Proinflammatory Response in Human Tissue on Chip: A Pilot Study.

Break for 5 minutes

Session 2: PFAS: Detection and Remediation

Moderators:

Dr. Silvana Andreescu, PhD., Professor & Chair, Clarkson University.
Dr. Arjun Venkatesan, PhD., Associate Professor, Civil & Environmental Engineering, New Jersey Institute of Technology.
Dr. YuYe J Tong, PhD., Director, Environmental Metrology & Policy Institute, Georgetown University.
Dr. Dibyendu Sarkar, PhD., PG., Professor of Environmental Engineering, Stevens Institute of Technology.
Dr. Zhiming Zhang, PhD., Assistant Professor, Rowan University.

3.45 – 3.55 pm: Brief Session Introduction

3.55 – 4.15 pm: Dr. Silvana Andreescu, PhD., Professor & Chair, Clarkson University.
Title: Sensors for PFAS.

4.15 - 4.35 pm: Dr. Dibyendu Sarkar, PhD, PG., Professor of Environmental Engineering, Stevens Institute of Technology, and Dr. Zhiming Zhang, Ph.D., Assistant Professor, Rowan University.
Title: Repurposing an industrial byproduct for PFAS remediation: Preliminary studies

4.35 – 4.50 pm: Dr. Eustace Fernando, PhD., Scholar at Stevens Institute of Technology.
Title: Photocatalytic degradation of PFAS compounds by unrefined ilmenite mineral and UV-C irradiation

4.50 – 5.10 pm: Dr. Dejun Chen, PhD., Assistant Professor, Environmental Metrology & Policy Institute, Georgetown University.

Title: The EMAP and PFAS.

DAY 2: THURSDAY, MARCH 7

9 am to 9.20 am: Introductory **Remarks** by Dr. Sivanesan Dakshanamurthy, Ph.D., MBA., Professor of Oncology, and Director, NCI Chemical Biology Consortium Center at Georgetown University.

Session 1: PFAS: Cancer Risks, Toxicity, and Mechanisms

Moderators:

Dr. Rena Jones, PhD., Principal Investigator, DCEG, National Cancer Institute (NCI).

Dr. Jackie Goodrich, PhD. Associate Professor, University of Michigan.

Dr. Moshe Levi, MD., Professor & Chief Scientific Officer, Georgetown University Medical Center.

Dr. Marybeth Martin, PhD., Professor of Oncology, Georgetown University Medical Center.

Dr. Anton Wellstein, MD., PhD., Professor, Georgetown University Medical Center.

9.20 - 9.30 am: Brief Session Introduction

9.30 – 10.00 am: Dr. Sue Fenton, PhD, Director, Center for Human Health and the Environment, North Carolina State University.

Title: The placenta as a gateway to later life adverse health effects induced by PFOA and GenX.

10.00 - 10.30 am. Dr. Alexis Temkin, PhD., Senior Toxicologist, Environmental Working Group, Washington, DC.

Title: Application of the Key Characteristics of Carcinogens to Per and Polyfluoroalkyl Substances

10.30 – 11.00 am: Dr. Leah Wehmas, PhD, Scientist, US EPA.

Title: PFAS, Metals, and its mixtures cancer risks, mechanisms, and biomarkers

11.00 – 11.30 am: Dr. Justin Conley, PhD., Toxicologist, US EPA.

Title: In vivo laboratory studies of PFAS mixture effects on maternal, fetal, and neonatal health.

11.30 – 12.00 pm: Dr. Rena Jones, PhD., Principal Investigator, DCEG, National Cancer Institute.

Title: Maternal serum PFAS and childhood acute lymphoblastic leukemia in the Finnish Maternity Cohort.

Lunch Break: 12.30 pm to 1.00 pm

1.00 -1.30 pm: Dr. Kristin Eccles, PhD., Scientist, Health Canada, Government of Canada.

Title: Unraveling the Complexity: Component-based approaches to quantify the effects of exposure to PFAS mixtures.

1.30 – 2.00 pm: Dr. Sergei Makarov, PhD., President & CEO, Attagene Inc., North Carolina.

Title: Assessing the biological activity of PFAS chemicals by transcription factor activity profiling

2.00 – 2.30 pm: Dr. Jesse Goodrich, PhD., Assistant Professor, Keck School of Medicine, University of Southern California.

Title: Associations and metabolic mechanisms linking PFAS with risk of hepatocellular carcinoma.

Break for 5 minutes

Session 2: PFAS: Detection and Remediation

Moderators:

Dr. Silvana Andreescu, Professor & Chair, Clarkson University.

Dr. Zhiming Zhang, PhD., Assistant Professor, Rowan University.

Dr. Dibyendu Sarkar, PhD., PG., Professor of Environmental Engineering, Steven Institute of Technology.

2.40 – 2.50 pm: **Brief Session Introduction**

2.50 – 3.15 pm: Dr. Erin Baker, PhD., Associate Professor of Chemistry, University of North Carolina.
Title: Using Multidimensional Separations to Identify PFAS Chemicals in Non-Targeted Analyses.

3.15 - 3.40 pm: Dr. Danielle R. Nachman, PhD. Senior Scientist, Johns Hopkins University – Applied Physics Laboratory.
Title: A holistic approach to PFAS remediation via capture, destruction, and byproducts sequestration

3.40 - 4.05 pm: Dr. Thomas Holsen, PhD., Professor of Environmental Engineering/Co-Director of CAARES, Clarkson University.
Title: PFAS water treatment challenges and solutions.

Break for 5 minutes

Session 3: PFAS: Public Health and Policy

Moderators:

Dr. Chiranjeev Dash, MBBS, PhD., MPH., Director of Cancer Screening, and Assistant Director of Health Disparities Research, Georgetown University Medical Center.

Dr. Olga Naidenko, PhD., Vice President, Science Investigations, Research & Development, Environmental Working Group.

Dr. YuYe J Tong, PhD., Director, Environmental Metrology & Policy Institute, Georgetown University.

4.10 - 4.15 pm: **Brief Session Introduction**

4.15 - 4.40 pm: Dr. Laurel Schaidler, PhD., Senior Scientist, Silent Spring Institute.

Title: PFAS contaminants and health effects: Scientists and affected communities working together to protect public health.

4. 40 – 5.05 pm: Ms. Mindi Messmer, MS, PG, CG, PFAS Specialist, Former NH House Rep.
Title: PFAS, Cancer, and Policy: When enough is enough.

DAY 3: FRIDAY, MARCH 8

9.00 am to 9.05 am: **Keynote Introduction**

9.05 am - 9.40 am: **Key Note Lecture.** Dr. Thomas Hartung, MD., PhD., Chair, and Director, Centers for Alternatives to Animal Testing, Johns Hopkins Bloomberg School of Public Health.

Title: Age 54 - Time to retire from the cancer bioassay?

Session 1: PFAS: Cancer Risks, Toxicity, and Mechanisms

Moderators:

Dr. Jamie DeWitt, PhD, DABT. Director, Environmental Health Sciences Center, Oregon State University.

Dr. Jonathan Hoffman, PhD., MPH., Senior Investigator, National Cancer Institute.

Dr. Benjamin Tycko, MD, PhD., Member, HMH Center for Discovery & Innovation (HMH-CDI), New Jersey;

Gary Kupfer, MD., Pediatric Medical Oncologist, Georgetown University Medical Center.

Dr. Avi Rosenberg, MD., PhD., Assistant Professor, Johns Hopkins University Medicine.

9.40 – 9.50 am: **Brief Session Introduction**

9.50 – 10.20 am: Dr. Irudayaraj Joseph Maria Kumar, PhD. Founding Professor of Bioengineering, University of Illinois Urbana-Champaign.

Title: PFAS role in select cancers

10.20 – 10.50 am: Dr. Jackie Goodrich, PhD. Associate Professor, University of Michigan.

Title: PFAS and Epigenetics: Mechanisms Underlying Disease

10.50 – 11.20 am: Dr. Jamie DeWitt, PhD, DABT. Director, Environmental Health Sciences Center, Oregon State University.

Title: PFAS role of immunosuppression as a mechanism in cancer

11.20 – 11.50 am: Dr. Jennifer Schlezinger, PhD. Associate Professor, Boston University School of Public Health.

Title: PPAR α the molecular initiating events (MIE) driving human-relevant toxic effects of PFAS.

11.50 – 12.20 pm: Dr. Jonathan Hoffman, PhD, MPH., Senior Investigator, DCEG, National Cancer Institute.

Title: Serum PFAS concentrations and cancer risk: Findings for kidney and breast cancers in prospective cohorts.

Lunch Break: 12.20 pm to 12.55 pm

12.55 pm to 1.00 pm: **Keynote Introduction**

1.00 pm - 1.35 pm: **Key Note Lecture.** Dr. Susan Burden, PhD., ORD PFAS Executive Lead, OSAPE Scientific Support Advisor, EPA.

Title: PFAS: Challenges and Opportunities for Public Health, Science, Policy, and Environmental Protection.

Session 2: PFAS: Detection and Remediation

Moderators:

Dr. Arjun Venkatesan, PhD., Associate Professor, Civil & Environmental Engineering, New Jersey Institute of Technology.

Dr. Silvana Andreescu, PhD., Professor & Chair, Clarkson University.

Dr. YuYe J Tong, Director, Environmental Metrology & Policy Institute, Georgetown University.

Dr. Dibs Sarkar, PhD, PG., Stevens Institute Technology, and Dr. Zhiming Zhang, PhD., Rowan University.

1.35 – 1.45 pm: **Brief Session Introduction**

1.45 – 2.10 pm: Dr. Mohamed Ateia Ibrahim, PhD., Scientists, US EPA.

Title: Forward Thinking PFAS Solutions | From Waste Remediation to Safer Substitutes.

2.10 – 2.35 pm: Mr. William K. Burris, MS, PG, Environmental Remediation Program Manager, JB Langley Eustis, Dover AFB, JB Andrews, JB Anacostia Bolling, US Department of Defense.

Title: PFAS Impacts on Military Construction: So You Want to Dig a Hole on an Air Force Base?

2.35 – 3.00 pm: Dr. Diana Aga, PhD., Director, RENEW, University at Buffalo.

Title: Bacterial Degradation of PFAS: Detection of by-products by target and non-target analysis.

3.00 -3.25 pm: Dr. Arjun Venkatesan, PhD., Associate Professor, Environmental Engineering, New Jersey Institute of Technology.

Title: Challenges in the treatment of short-chain PFAS.

Break for 5 minutes

Session 3: PFAS: Public Health, and Policy

Moderators:

Dr. Olga Naidenko, PhD., Vice President, Science Investigations, Research & Development, Environmental Working Group.

Dr. YuYe J Tong, PhD., Director, Environmental Metrology & Policy Institute, Georgetown University.

Dr. Chiranjeev Dash, MBBS, PhD., MPH., Director of Cancer Screening, and Assistant Director of Health Disparities Research, Georgetown University.

3.30 -3.40 pm: **Brief Session Introduction**

3.40 – 4.05 pm: Dr. Jeffery A. Stevens, PhD., Research Toxicologist, The United States Geological Survey (USGS).
Title: USGS PFAS research: Investigating occurrence, fate, and ecotoxicology within a One Health context.

4.05 – 4.30 pm: Dr. Rebecca Aicher, PhD., Project Director, Center for Scientific Evidence in Public Issues, AAAS.
Title: Fostering Safe, Equitable & Sustainable PFAS Policy Solutions.

4.30 – 4.55 pm: Ms. Sydney Evans, MPH., Senior Science Analyst. Environmental Working Group.
Title: Getting 'forever chemicals' out of drinking water: EWG's guide to PFAS water filters.

4.55 pm – 5.05 pm: **Closing Remarks**