



From Water to Air; Scientific Pathways towards a Clearer, Cleaner Future.

November 5th and 6th
St. Prex / Lausanne, Switzerland

The program titled "*From Water to Air; Scientific Pathways towards a Clearer, Cleaner Future*" will focus on the challenges that exist and those that lie ahead if we do not properly address the issues that the planet currently faces. Air and water are critically joined in life on the planet. Air without water, like water without air, does not sustain life. The recent pandemic has engendered additional focus on this essential reality as science has worked to unravel the characteristics of the virus transmission. Poor air quality is a leading cause of death in developing countries and clean water an increasingly scarce resource. We will consider many of the scientific insights and breakthrough discoveries including new modes of breathing hygiene, energy generation, and water procurement that can provide a sustainable pathway forward.

This fall's conference will be live-streamed by our partner Jason Learning.

Conference Co-chairs

Lorie Karnath, Next Breath President

Xavière Masson Dziemian, World Frontiers Forum, Founding Director





**TENTATIVE
CONFERENCE
PROGRAM**

**Nov. 5th
DAY 1**

Session One: Earth, the Climate Crises, Global Health

9:00 Welcome

9:15 Our Place in Time

Prof. Donald Johanson, Arizona State

9:30 From Poliomyelitis to the COVID-19 Pandemic. Reflections by a Virologist

Prof. Erling Norrby, Royal Swedish Academy of Science

9:45 Is Clean Indoor Air a Politically Impossible Goal?

Prof. Lidia Morawska, Queensland Technological University

10:00 Panel Discussion

10:30 Break

10:45 Cool but Dangerous: How climate change is increasing the risk of airborne infections

Prof. Ed Nardell, Harvard School of Public Health

11:00 Perspectives from the epicenter of the virus - A case for upper airway hygiene to mitigate respiratory disease

Dr. Carol George, Bangalore Baptist Hospital

11:15 Breathing better in a dirty world: What airborne infectious disease teaches us

Prof. Tony Hickey, Distinguished Fellow, RTI International

11:30 The Need for Multisectoral Action for Human and Planetary Health

Dr. Peter Friberg, SIGHT and Sahlgrenska academy, Gothenburg university

Prof. Goran Tomson, SIGHT and Karolinska Institute

11:45 Panel Discussion

12:30 Lunch



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**Nov. 5th
DAY 1**

Session Two: From Water to Air

13:30 How can systems approaches inform our evidence base for scientific guidance development and implementation?

Dr. John Grove, World Health Organization

13:45 Digital Epidemiology and the Covid-19 Pandemic

Prof. John Brownstein, Harvard Medical School and Children's Hospital Boston

14:00 The beasts we breathe out: studies on directly sampled exhalations

Prof. Michael Barer, University of Leicester

14:15 Exhaled Aerosols and Virus Infection

Dr. Gerhard Scheuch, GS Bio-Inhalation

14:30 Panel Discussion

15:00 Break

Session Three: From Water to Air - continued

15:15 When Particles Make Drugs & Vaccines Work - from Treating tumors to a Covid-19 Vaccine

Prof. Robert Langer, Massachusetts Institute of Technology

15:30 Acoustic Epidemiology: What Cough Can Teach Us About Ourselves and the World We Live In

Prof. Peter Small, Stony Brook's Global Health Institute (GHI)

15:45 Aerosol Infectivity and Respiratory Transmission of SARS-CoV-2

Prof. Chad Roy, Tulane University

16:00 Effect of Relative Humidity in Air on the Transmission of Viral Respiratory Infections

Prof. Richard Zare, Stanford University

16:15 Panel Discussion

**TENTATIVE
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**Nov. 6th
DAY 2**

Session Four: Pathways towards a Clearer, Cleaner Future

9:00 Welcome

9:15 Portable CRISPR Point of Care Detection of COVID 19 (tentative title)
Prof. Melanie Ott, Gladstone Institute and University of California San Francisco

9:30 Myths and facts about filtering air with face-masks
Dr. Adriaan Bax, National Institute of Health

9:45 SARS-CoV2 and air pollution interactions
Prof. Kian Fan Chung, Imperial College

10:00 Climate Change and a clean energy transformation: Will it bring cleaner air for all?
Prof. Dan Schrag, Harvard University

10:15 On the Quantification of Phenotype and the State of our hydrated relationship to the environment
Prof. Denny Ausiello, Harvard Medical School and Massachusetts General Hospital

10:30 Panel Discussion

11:00 Break

11:15 Airway Hydration as the Next Human Hygiene
Prof. David Edwards, Harvard University

11:30 The Air Economy Powered by Reticular Chemistry for Clean Water from Air, Clean Energy from Air, and Clean Air
Prof. Omar Yaghi, Berkeley University

11:45 A Scientific Recipe for Saving the World
Prof. Bengt Norden, Chalmers University, Royal Swedish Academy of Science

12:00 General Discussions / Conclusions

12:45 Lunch

