

# Program: Thursday 24th June

## Topic of the Day: Environment and Health

10:00 - 11:00

**Zastenskaya I. (WHO)** Chemical safety within the European Environment and Health Process

**Short Description:** The presentation will include general information on WHO activities in chemical safety area followed with the progress achieved in the WHO European Region. It includes implementation of international multilateral agreements and other policies, risk assessment, circular economy and contaminated sites, recent projects to address specific needs of countries.

11:00 - 12:00

**Bergman A. (Stockholm University)** Science advances in relation to emerging chemicals and their fate in the environment

**Short Description:** I am inviting you to a tour departing from the mid 1970's when research was still young on PCBs and DDTs via research achievements of those POPs and others, including chlorinated paraffins, brominated flame retardants till the emerging pollutants and emerging issues of today.

12:00 - 12:30

**Break**

12:30 - 13:30

**Chervova O. (UCL)** Epigenetic signature of lifestyle and environmental exposure

**Short Description:** This talk will be started with a brief introduction to epigenetics and epigenetic modifications. One of those modifications - DNA methylation - will be covered in more detail. We shall discuss how DNA methylation is affected by diseases and environmental factors.

13:30 - 15:00

**Paudel B. (Stanford University)** Increased exposure to wildfire air pollution and its effect on hospital utilization rates

**Short Description:** Exposure to wildfire smoke could have multiple effects on health in the exposed population, as it has been shown that wildfire smoke contributes dangerous levels of particulate matter pollution and other toxins in the air. In this study, we look at large satellite datasets of wildfire smoke and air pollution, and combine them with datasets of human mobility and healthcare utilization in order to study the effect of air pollution on human health. We found that a majority of states in the Western United States have been exposed to increasing number of days with wildfire smoke in the past decade, and counties in the densely populated regions of Northern California have been exposed to smoky days at an even higher annual rate (1.27 to 1.5 more smoky days per year). We also determined how exposure to wildfire smoke in California affected hospital admissions for various disease conditions and found that among the hospital admissions related to respiratory, cardiovascular, renal, mental, and pregnancy-related conditions significantly increased after exposure to wildfire smoke. Such findings demonstrate the susceptibility of even healthy populations and further directs research towards identifying a biological mechanism for smoke exposure. We also find that the effect of wildfire smoke extends beyond cardiovascular and respiratory conditions, especially increasing pregnancy-related adverse events.



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