**Early Detection of Diseases through Environmental Surveillance**

**Date:** April 24, 2025, **Time:** 10:00 AM – 3:00 PM

**Location:** Indian National Science Academy

**Inaugural Session [10:00 – 11:00]**

Welcome Remarks [10:00 – 10:10]

- Dr. Vinay K. Nandicoori, Director, Centre for Cellular and Molecular Biology

***Video Presentation by The Alliance for Pathogen Surveillance Innovations (APSI-India)*** *[10:10 – 10:15]*

**Keynote Address** [10:15 – 10:35]

- Dr. Vinod Kumar Paul, Member, NITI Aayog

**Special Address** [10:35 – 10:45]

- Dr. N. Kalaiselvi, Director General, Council of Scientific & Industrial Research

***Technical Presentation by APSI India*** *[10:45 – 11:00]*

**Session 1: Leveraging Wastewater Surveillance in India as a Public Health Response for Early Detection of Disease [11:00 – 12:30]**

Wastewater surveillance (WWS) is one type of environmental surveillance tool that has been empirically utilized to track pathogens transmitted by waterborne or fecal-oral routes. It is most easily implemented at a wastewater treatment plant, providing a representative sample for all individuals connected to a sewer network. Wastewater surveillance can detect the onset of diseases early, providing public health authorities with crucial time to take necessary measures. However, the surveillance system is still not integrated with the national framework and has not been adopted universally. This panel discussion will explore how wastewater surveillance can be leveraged as a comprehensive public health response strategy.

The objectives of these sessions are as follows:

- Foster a comprehensive understanding of the current state of environmental surveillance and its potential to enhance public health preparedness and response.
- Develop cross-disciplinary dialogue and identify strategies to overcome challenges in implementing effective environmental surveillance programs.
- Drive Policy and Regulatory Changes to incorporate environmental surveillance into national disease reporting frameworks.
- Address gaps in laboratory, capacity and technical expertise by developing capacity-building programs for the future.

**Session Chair & Moderator**: Dr. Shubnum Singh, Founder Member, Max Healthcare Institute

- **Special Address by**: Dr. Ajay K. Sood, Principal Scientific Adviser, Government of India

Panelists:

- Dr. Onkar N. Tiwari, Scientist 'F', Department of Biotechnology, Ministry of Science and Technology
- Dr. Purva Sarkate, Joint Director, National Centre for Disease Control, Ministry of Health and Family Welfare
- Dr. N Krishna Reddy, CEO, Access Health International
- Dr. Mitali Samaddar, Lead, Tech for Surveillance, Centre for Cellular and Molecular Platform, Bengaluru
- Dr. L S Shashidhara, Director, National Centre for Biological Sciences, Bengaluru

***Break for Lunch [12:30 – 13:30]***

**Session 2: Building an Integrated Environment Surveillance System under India's One Health Mission [13:30 -15:00]**

India's National One Health Mission has identified integrated environmental surveillance as a key priority to strengthen the country's pandemic preparedness and response capabilities. An integrated environmental health surveillance system is the systematic, ongoing collection and analysis of information related to various environmental diseases and how it effects individuals and institutions. Such a system provides the necessary evidence and tools to help prevent, control and protect the health of individuals and the environment by informing policy decisions. To ensure we build an integrated surveillance system, we must drive policy and regulatory changes by incorporating environmental surveillance into the national disease reporting framework. This panel discussion will seek to foster coordination between public health, veterinary, environmental, and other relevant agencies while expanding environmental sampling to include air, soil, wastewater, and other environmental matrices.

The objectives of this session will include:

- Deliberation on measures to be undertaken to build an integrated environmental surveillance system
- Challenges and opportunities with developing an integrated surveillance system
- How such a system can aid policymakers to undertake timely measures to control the spread of diseases

**Session Chair & Moderator:** Dr. Raj Shankar Ghosh, Public Health Foundation of India (PHFI)

- **Special Address by**: Dr. N K Arora, Executive Director, INCLEN International

Panelists:

- Dr. Sangeeta Agarwal, Scientist 'F', Office of the Principal Scientific Adviser, Government of India
- Dr. Sanjeev Khosla, Director, CSIR-IMTECH
- Dr. Rakesh Mishra, Director, Tata Institute for Genetics and Society, Bengaluru
- Dr. Anurag Agarwal, Dean- Trivedi School of Bio Sciences, Ashoka University

***Tea and Networking/Discussions***