

National Science Day

Special Talk by

Prof Gagandeep Kang

ON

**“Preparedness, Response and Research
when Epidemics and News go Viral”**

Epidemics are and will continue to become more frequent, more complex and harder to prevent and contain. Current demographic transitions—driven by population growth, rapid urbanization, deforestation, globalization of travel and trade, climate change and political instability have fundamental effects on the dynamics of infectious diseases. In a changing world, these drivers ensure that pathogens can and will cross barriers and spread, in increasingly unpredictable ways. Epidemics disrupt health systems and create long-lasting socio-economic effects. Fear and panic spread fast and amplify mistrust in the community.

As the SARS, MERS, Ebola and COVID-19 outbreaks show, our concept of epidemics must evolve from crisis response during individual outbreaks to an integrated cycle of preparation, response and recovery. For rapidly evolving, high-impact events, preparedness and collaborations designed and defined ahead of the outbreak are essential to bring together communities, responders and researchers who do not currently interact.

We have to act now, but act differently. From public health epidemiology and infectious disease experience to social sciences, diplomacy, logistics and crisis management—inter-sectoral collaboration is critical for a cohesive rapid response. Research and development in an emergency has unique challenges, but preparation, as with platform technologies for vaccines and diagnostics, for sharing data and samples, sequencing and capacity for new diagnostics, can be key drivers of rapid innovation for tools to protect our populations.

Confidence in our health systems, our agencies, and our scientists is vital. This is enhanced by working together to protect our people, advance science and enable development of technologies to protect the world.



**Department of Science & Technology
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Executive Director,

Translational Health Science and Technology Institute

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**“Preparedness, Response and Research
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on Friday the 28th February, 2020 at 1130 hrs at
Plenary Hall, Vigyan Bhawan,
New Delhi

Professor Gagandeep Kang



Professor Gagandeep Kang is the Executive Director of the Translational Health Science and Technology Institute, Department of Biotechnology. She serves/served on the scientific and advisory committees of several national and international institutions, including the World Health Organization, Wellcome Trust, International Vaccine Institute and International Center for Genetic Engineering and Biotechnology. She currently chairs the Immunization Technical Advisory Group of the WHO South East Asian Region. She is Vice-Chair of the Board of the Coalition for Epidemic Preparedness Innovations, a global partnership seeking to pro-actively develop vaccines for epidemics.

Professor Kang has built strong inter-disciplinary research programs on enteric infections, nutrition and child development. She is internationally recognized for her contributions to vaccine development for rotavirus and vaccine policy. She trains students and young faculty in clinical translational medicine aiming to build a cadre of clinical researchers studying relevant problems in India. She is the first Indian and globally the first woman to edit the 100+ year old classic, Manson's Textbook of Tropical Medicine. Her work has been recognized through several awards, most notably the Infosys Prize in Life Sciences, so far the only award to a physician. In 2019, she was the first Indian woman elected a Fellow of the Royal Society.