PMAC PRINCE MAHIDOL AWARD CONFERENCE 2021

WS301

ACCELERATING ADVANCES IN SCIENCE AND TECHNOLOGIES TO "PREVENT, DETECT, RESPOND TO AND RECOVER FROM" FUTURE THREATS

| BACKGROUND

The COVID-19 pandemic has dramatically illustrated our collective vulnerability when we lack readily available biomedical countermeasures and interventions to control a novel threat. Our limited capacity to create these responses de novo compounds the problem. There is an urgent need to expand our knowledge about future viral threats BEFORE they directly threaten us, and to have in hand tools and capabilities to respond rapidly upon their onset. Our investments must move beyond advancing science and technology alone, but also focus on the processes and systems that link these advances to policy making. Despite extraordinary achievements over the past decades, particularly in the areas of genomics, big data and artificial intelligence, the sciences associated with pandemics and epidemics have largely remained outliers. We also lack understanding of the ecological and climate-related drivers that will contribute to future pandemics and/or epidemics. There have been few notable advances in our ability to forecast future outbreaks or reduce the likelihood of future 'spillovers', and early detection and rapid response remain great challenges. Globally, we still have an inadequate capabilities and capacities to generate new biomedical countermeasures and interventions that are broadly applicable across viral and bacterial populations and available prior to a pandemic and/or epidemic and readily available to support a rapid response.

| OBJECTIVES

This session will explore the following questions:

- How can key technologies that have a place in addressing epidemic and pandemic threats shift from their current reactive use to a far more proactive approach?
- What is the role of 'big data' and artificial intelligence in harnessing scientific innovation for forecasting and responding to pandemics and epidemics?
- What is the role of climate and weather as drivers of pandemics and/or epidemics, and how can we integrate climate and/or weather information and data into health tools or systems to prepare for future health challenges?
- What systems, processes and institutional capacities are required to ensure that advances made in scientific knowledge and technologies are appropriately incorporated into policies and practices for maximum impact?
- How can we collectively benefit and use evidence from research and development on diagnostics, vaccines, and therapeutics to improve their availability and accessibility for present and future threats?



Speaker

Naveen Rao

Senior Vice President for Health

The Rockefeller Foundation
United States of America

Dr. Naveen Rao is Senior Vice President of the Health Initiative at The Rockefeller Foundation. He leads a team focused on advancing Precision Public Health, empowering community health workers with actionable insights from data and analytic tools to accelerate progress on health outcomes in their communities. For decades, Dr. Rao has led efforts to equip health care providers with the skills, tools, and technologies necessary for success. He joins the Foundation after 25 years with Merck & Co., Inc., where he led Merck for Mothers, a 10-year, $500 million initiative to reduce maternal mortality globally and worked as Head of Medical Affairs for Merck's Asia-Pacific region and Managing Director of Merck's subsidiary in India.Dr. Rao is Board Certified in Internal Medicine, an American College of Physicians Fellow, and sits on the Medic Mobile Board of Directors. He represents The Rockefeller Foundation on Global Fund ATM's Private Foundation constituency