



**Indo-U.S. Workshop on
Challenges of Emerging Infections and Global Health Safety**

Indian National Science Academy (INSA)
New Delhi, India
November 18 - 20, 2014

Statement of the Workshop Co-Chairs

The Indo-U.S. Workshop on Challenges of Emerging Infections and Global Health Safety, held November 18-20, 2014 on the campus of the Indian National Science Academy, encouraged scientists from both countries to examine global issues related to emerging and existing infections and global health safety, to share experience and approaches, and to identify opportunities for cooperation to improve practice and research in these areas. The workshop was the culmination of a multi-year joint effort by the Indian National Science Academy (INSA) and the U.S. National Academy of Sciences (NAS) to enhance partnership among the scientific and technical communities of the two countries on urgent and relevant areas of global health and biological safety.

The primary goal of the workshop was to jointly share challenges and lessons learned regarding biological safety, laboratory management, and the general efficient and sustainable operation of laboratories for public and animal health research, and clinical applications for improving global health safety. A secondary goal was to encourage collaborative partnerships between Indian and American scientists in areas identified by both groups during the workshop keeping in mind the existing multilateral agreements between the two countries.

Workshop speakers outlined the burden of infectious diseases and the importance of antimicrobial resistance; food security, pathogen identification, infectious disease control (including the global challenges of influenza and Ebola) and provided an overview of laboratory diagnostics for virulent and drug resistant pathogens. The inclusion of biotechnology and modern biology, such as synthetic biology, was also raised as absolutely essential to incorporate since the rate of scientific advancement is only increasing, posing a both potential benefits and hazards to global health safety. Throughout the plenary sessions and breakout groups, speakers and participants discussed the importance of:

- assessment of risk associated with particular types of research and the appropriate biosafety levels for such research;
- inter-sectoral needs and coordination when dealing with emerging diseases of humans and animals;
- development and approval of guidelines, regulations, and best practices;
- training at all levels, from management to maintenance personnel;
- developing and retaining leaders, including biosafety officers, building engineers and scientists, basic and applied professionals with scientific and technical depth who are globally connected and able to work with international colleagues;
- addressing advances in biotechnology and their effects on the management and maintenance of laboratories;
- issues related to data sharing, planning, construction and operation of biosafety laboratories;
- effective laboratory leadership to building trust and to instill a culture of safety and responsibility among all laboratory personnel; and,
- importance of communication with the public to promote community engagement to address and alleviate concerns and build confidence.

Each of these topics could serve as a point of departure for the joint cooperation between INSA and NAS to formulate joint findings and recommendations for consideration by the governments of India and the United States. The unique capabilities of the science academies of India and the United States were cited as holding exceptional ability to provide guidance to their governments, and the cooperation between INSA and NAS exemplified in this workshop underscores the opportunities for relevant, realistic, long-term, and sustainable partnership.

Several speakers representing the government of India stated the urgency and importance of the multiple critical issues covered during the 2 ½ day workshop. Specifically, multiple Indian government participants indicated that advice regarding biosafety guidelines for laboratories, effective training for researchers and clinicians dealing with infectious and zoonotic diseases, and enhanced public engagement and outreach on the importance of safe and secure laboratories would be particularly welcomed.

Beyond India and the United States, the needs of the broader South Asian region for more robust laboratory capacity to address diagnostics, response and research regarding public health challenges were discussed by multiple speakers and participants. Given India's existing and planned laboratory capacity, capabilities in global health research, and expanding international partnerships, it is well situated to become a leader in global health safety.

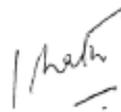
As a direct follow-on to this workshop, INSA and NAS agreed to partner together to conduct a regional workshop in 2015 focusing on building the capacity of laboratories and affiliated researchers to tackle the region's most difficult public health challenges safely and securely. The workshop will provide an opportunity to convene life science, biological safety and disease surveillance experts from academia, industry, and government to address a set of issues, which may include:

- development of guidelines;
- laboratory training, certification and leadership development;
- mechanisms for reporting laboratory-associated infections;
- right-sizing the regulatory environment and collaboration in regulatory sciences;
- regional transport of samples and specimens;
- matching precautions to risks; and,
- responsible research practices in pursuit of the benefits of life science research.

At the opening and closing sessions of the Indo-U.S. Workshop on Challenges of Emerging Infections and Global Health Safety, leaders of INSA and NAS underscored their support for the workshop, for the India-U.S. partnership that it embodies, and for future cooperative efforts to strengthen global health safety and security in their two countries, in the region, and around the world. The two countries are uniquely suited to carry this cooperation forward to address existing and emerging infectious diseases of humans, animals, and plants, and to thereby improve the health and welfare of people and the environment globally.



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