The Indo-U.S. Workshop on Challenges of Emerging Infections and Global Health Safety is designed to encourage scientists from India and the United States to examine global issues related to emerging infections and global health safety, to share experience and approaches, and to identify opportunities for cooperation to improve practice and research in these areas. In general, the workshop participants will address challenges posed by infectious diseases within India and the United States and across national borders. The participants will address both human and animal health because zoonotic infections such as avian flu and anthrax have shown that the borderlines between animal and human health are merging. Because of the evolving nature of infectious disease, in addition to the current status of human and animal health issues, surveillance in real time to detect emerging outbreaks and to predict emerging epidemics is critical.

Sessions will touch on issues associated with the global life sciences revolution and today’s challenges with respect to emerging infections and epidemics and focus on issues that are of particular relevance to India and the United States to achieve the right balance between safety and advancing life science research on pathogens.

How to achieve prompt communication of suspected new infections and methods for transportation of infected material will be discussed in the context of the safe use, management, and operation of high containment (BSL 3-4) laboratories in India and the United States. In addition, new and exciting developments in technologies, such as the biotech revolution and synthetic biology as well as the utility of codes of ethics/conduct for avoiding improper use of pathogens will be explored. Regulatory issues in both countries as well as multilateral agreements on these issues would be visited. Finally, sustainability issues in maintaining surveillance, laboratory facilities and modeling for predicting epidemics will also be discussed.

The workshop will begin with speakers outlining the burden of infectious diseases and the importance of pathogen identification, infectious disease control (including the global challenges of influenza and Ebola) and will provide an overview of laboratory diagnostics for virulent and drug resistant pathogens. Subsequent sessions will focus on 1. The integration of human and animal public health systems and disease surveillance will be described, and participants will explore potential responses to agricultural pathogens in both countries and ways to prevent economic loss in the event of an outbreak through a
discussion of disease modeling, forecasting, and issues related to data sharing. 2. Path changing technologies and innovation in biology as well as containment laboratory issues associated with new developments in life science. 3. Existing regulations and their implementation in the United States, India, and other countries and organizations with regard to recombinant DNA, product development, good laboratory practices (GLP), and the utility of codes of ethics/conduct. 4. Management and training for laboratory networks, effective disease surveillance before and after incidents and how to educate and interact with the public, government, industry, and academia about life science research.

Working group breakout sessions will cover 1. Research of concern on new pathogens, regulations, and codes of ethics/conduct. 2. Comparison of different biosafety methodologies and the implications of different assessments. 3. Levels of biocontainment; answering research questions at economically viable containment levels or with alternate methods. 4. Sustainability of surveillance laboratories; cutting costs without compromising safety. 5. Diagnostic and field laboratories: safety considerations for transportation of diagnostic samples and in emergency situations. And 6. Laboratory accidents and laboratory-acquired infections (LAIs) including response, reporting, and planning.

The final session will touch on public health challenges for disaster management in South East Asia and the United States. Workshop participants will be asked to discuss possible areas for collaboration and partnership like joint training centers and/or the initiation of additional bilateral or multilateral workshops on global health and biological safety.

The ultimate goal is to jointly share challenges and lessons learned regarding biological safety, laboratory management, and the general efficient and sustainable operation of laboratories for public health, animal, and plant health research and clinical applications for improving global health safety. A secondary goal is 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.

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