

EVENT RELEASE DAY 2

Indian and US scientists to discuss emerging diseases and global health

Venue: Indian National Science Academy (INSA) premises, New Delhi, India ([Map](#))

Dates: November 18 – 20, 2014

The second day of the three-day conference at INSA saw the two participating countries exchange notes about the various biosafety protocols in each country. What emerged was that while there are various safety guidelines available in India, there is no strict rule enforcing these guidelines -- following them is not a compulsion.

This may soon be rectified. Dr Vasantha Muthuswamy, who was with the Indian Council of Medical Research (ICMR) and a worldwide authority on ethics in research, said that there is a Bill prepared for the Indian government, based on the biosafety guidelines available for ICMR. The bill, titled “The Biomedical Research on Human Participants (Ethical, Legal, Social Issues) Bill”, is being pushed by ICMR to the Government of India. The Bill will have provisions for a body which would be in charge of biosafety regulation, which would also train personnel in the field.

“Even though we have plenty of exhaustive guidelines, how many people are aware of them, how many are following them -- that is the main concern”, said Dr Muthuswamy. She also said that capacity building for everyone from researchers, ethics committee members, sponsors, policy makers and medical professionals is the need of the hour. Bioethics education and biosafety training and dissemination, along with legislation, would ensure that there are better regulations in India.

India is the only country with BSL-4 (Bio Safety Level 4, the highest level of biocontainment) in South Asia. This makes it imperative for India to ensure the highest standards, not just for the country itself, but for the region as a whole.

A set of talks also discussed safety within the laboratory. Prof Robert Martin from the University of Washington raised concerns that there is a low percentage of people trained in biosafety in charge of research and medical laboratories in India and other Asian countries. “Leaders at all levels should be concerned about lab safety, starting with lab head”, he said.

BM Subramanian from the Tamil Nadu Veterinary and Animal Sciences University spoke on the need for two different types of biosafe facilities: those where infection has to be kept inside a room, the biocontainment facilities and the situations where contaminants should not be allowed into an enclosed space.

Joseph Kanabrocki spoke of the need to engage the local community with what a research facility is doing, so that they feel included. He stressed that this involvement needs to be a continuous process and not a one-off incident.

In the concluding sessions yesterday, Prof Mohan Rao, Director of CCMB Hyderabad, introduced engineering into the discussion. He spoke of novel, inexpensive tools for diagnosis and treatment of diseases: an antifungal nanoparticle to treat fungal disease of the eyes, a diagnosis kit for eye diseases, DNA based diagnostics and using paper as a substrate for diagnostic kits and so on.

Synthetic biology, the technique of making DNA from scratch, also received a thorough treatment in the hands of Pawan Dhar, a Professor in the Department of Life Sciences in the Shiv Nadar University. He spoke of biosafety measures which we need to have in place before synthesis of novel microorganisms for different purposes.

In a pre-dinner lecture, Prof K VijayRaghavan, Secretary of the Department of Biotechnology, said that India had the ability to develop solutions that can be applied to multiple solutions because the country invested in science and technology post independence. He also quoted a study which showed, though one would expect diseases to occur more in poverty struck, densely populated areas, emerging infections are usually reported from developed countries. This pattern surprised the researchers. After detailed analysis, they found that this was the case because “we are searching under the lamp post simply because there is light” - in other words, diseases were being reported from countries like the US not because they are more common, but because they are better reported.

Tomorrow, the workshop will look to consolidate its deliberations over the last two days. This afternoon, six parallel “break out” sessions examined a variety of issues, from regulation and codes of ethics about new pathogens, whether we can have economically viable containment facilities in countries like India which still hold to standards, safety considerations while transporting diagnostic samples and lab accidents and infections. A summary of each of these sessions will be presented tomorrow.

A two-page document summarising the take home from the workshop will be released tomorrow. A short session on managing diseases during disasters is also scheduled.

Useful Links:

Prof Indira Nath: <http://www.insaindia.org/detail.php?id=N92-1095>

Dr James LeDuc:
http://www.utmb.edu/internalmedicine/divisions/infectious_diseases/faculty/bio_leDuce.asp

Prof Raghavendra Gadagkar: <http://ces.iisc.ernet.in/hpg/ragh/>