

Global symposium on Tuberculosis to be held at NII next week

By Dr. Bilqeesa Bhat



New Delhi, February 13: The Department of Biotechnology's autonomous institute, the National Institute of Immunology (NII) along with International Centre for Genetic Engineering & Biotechnology (ICGEB), New Delhi is organizing a specialized symposia on **extra-pulmonary** tuberculosis from February 11th to 15th 2020.

During the meeting, discussion and deliberation will be held on thematic areas like phenotypic heterogeneity and persistence, mycobacterial lifestyle, metabolism, and signaling in the host microenvironment, host immunity, alternate niches of mycobacteria, systems biology of mycobacterial pathogenesis, drug resistance in tuberculosis, and extra-pulmonary TB.

Tuberculosis (TB) continues to be a major global health problem. India accounts for 27% of the world's TB burden. Over past few years, the country has experienced some slowdown in pulmonary TB cases. However, the number of extra-pulmonary cases is on the increase. This has added to the overall burden of the TB in India and has become a cause of alarm. At present, no definitive diagnostics are available for detecting extra-pulmonary TB, and the available treatments regimes are of long durations.

Extra-pulmonary TB patients are given broad spectrum and mycobacterial-specific antibiotics primarily meant for pulmonary TB but for longer durations of 12-24 month. Long duration treatment regimes affect the patient compliance. According to multiple clinical reports, such treatment regimes have resulted in the prevalence of multi-drug resistant (MDR) and extensively

drug resistant (XDR) strains of *Mycobacterium tuberculosis*. In line with this, India contributes to 25% of the global MDR-TB burden.

Among other things, there are concerns that long treatments could create drug resistant gene reservoir in the intestinal microbiome of extra-pulmonary TB patients. Some studies have shown a close link between persistent gut microbial alterations (dysbiosis), immune system and TB treatment.

The ensuing symposium will also address the global emerging threat associated with phenotypic and genotypic diversity of pathogen *M. tuberculosis* and its consequences on disease development, host-response and drug resistance. The host-pathogen cross talk or interaction is a key factor responsible for *M. tuberculosis* infections.

During the past two decades, pulmonary TB have been studied in depth and several important characteristic features of *M. tuberculosis* replication, intracellular survival, lipid and carbon metabolism, granuloma and dormancy pathogenesis and its drug resistance has been explained thoroughly. Such studied have generated a huge knowledge base, which can be explored to address the problems that span other cell types and tissues.

The European Molecular Biology Organization (EMBO) and India Alliance will provide travel grant to a limited number of participants. The EMBO also offers grants to offset additional child care costs incurred by participants or speakers. Applicants should indicate on the registration form if they wish to be considered for a travel grant or child care grant.

The 5-day meet will bring together investigators, clinicians and students, and post-docs from all the over world. It is expected to provide impetus to undertake research programs providing momentum towards accelerated clinical outcomes.

Contact person:

Dr. Anil Kumar

Staff Scientist, National Institute of Immunology, New Delhi

Phone no. 9911247197