

Institute Lecture

Will we succeed in winning the war against Mycobacterium tuberculosis, the deadly human pathogen that causes TB and takes one human life every 15-20 seconds?



Professor Seyed E. Hasnain
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Date/Time: Tuesday, 20th of January 2015; 6.15 PM*

Venue: L-17, Lecture Hall Complex

Abstract of the Talk: *Mycobacterium tuberculosis* (M.tb), the pathogen that causes tuberculosis (TB), takes one human life every 15 seconds somewhere in the world. TB remains the largest cause

of death and morbidity, that too mostly in the economically productive age group. Despite the enormity of the problem, having infected 1/3rd of the world population, there has been no new drug against tuberculosis during the last >40 years, no new vaccine after the last one was discovered >75 years ago and no new diagnostics after the tuberculosis skin test discovered >125 years ago. The sequencing of the M.tb genome and its availability in the public domain, more than 10 years ago, raised huge hopes about new interventions and diagnostics against this dreadful disease. All we got so far is a slightly better understanding of the biology, pathogenicity and dissemination of this bacterium pointing to the smart, intelligent and cunning strategies the pathogen adopts to avoid the human immune system. Coupled with the fact that TB has many social and economic determinants, in addition to discovering novel biomedical solutions, it will also be very important to devise innovative strategies to reach TB patients particularly those belonging to the marginalized and vulnerable sections of the society. With new challenges of drug resistant bacterium (MDR, XDR and TDR), synergy with HIV-AIDS and the accompanying IRIS, and the emergence of diabetes as global health problem, TB is bound to take center stage globally. My presentation will focus on highlighting TB as a Grand Challenge which not only continues to baffle scientists with the innovative and intelligent survival strategies adopted by the pathogen, but also challenging human race in forcing us to relook at our trans-national political, social and economic commitments so as to successfully intervene against this dreaded, but otherwise curable disease.

About the Speaker: Professor Seyed E. Hasnain is a Padma Shri awardee and has received Germany's Highest Civilian Award - The Order of Merit (Das Verdienstkreuz, 1.Klasse), from the President of Germany. He has been elected as Fellow of the American Academy of Microbiology (USA), TWAS (Trieste) and to the major science academies in India (FNA, FASc, FNASc). He was a Member of Science Advisory Council to the Prime Minister and was also a Member of Scientific Advisory Committee to the Union Cabinet. He received Humboldt Research Prize (Alexander-von-Humboldt Foundation, Germany), the Robert Koch Fellowship of the Robert Koch Institute, Berlin, was elected as a Member of the German National Academy of Sciences Leopoldina. Prof. Hasnain is also recipient of many prestigious Indian Awards such as G.D. Birla Award, Shanti Swarup Bhatnagar Prize, FICCI Award, J.C. Bose National Fellow, Ranbaxy Research Award, Goyal Award, Bhasin Award etc. Prof. Hasnain is an institution builder, policy maker, an administrator and importantly, an active scientist. He was the first Director of Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad, and then served as the Vice Chancellor of central University of Hyderabad. Prof. Hasnain served as the Chairman and member of the Academic Committee of several prestigious institutes (PGI Chandigarh, AIIMS New Delhi, IISc Bangalore, IIM Kozhikode, etc). He is well known internationally for his research on Mycobacterium tuberculosis, the TB causing bacterium, and has more than 250 publications in peer reviewed journals of high impact, and more than a dozen patents globally. Professor Hasnain taught at the University of Delhi and after his return to India in 1987 joined the National Institute of Immunology (an Institute of the Ministry of Science and Technology, Govt. of India), was at Oxford and is currently an Invited Professor, IIT Delhi.

All interested are welcome to attend

*Tea at 6.00 PM

Prof. K. Muralidhar
Dean of Research and Development