Deciphering the markers of Mtb latency through Mesenchymal Stem Cell

Annu Devi[1] Gobardhan Das[1]
*** [1] Special Centre For Molecular Medicine (SCMM) ,JNU ,New Delhi,India-110067**

Mycobacterium tuberculosis (M.tb) is the second leading cause of death worldwide after HIV infection. Currently one third of the world's population is infected with TB. Among them most of the individuals are asymtomatic,about 10% of these individuals develope active TB (ATB) during their lifetime.The *Mycobacterium tuberculosis* is an acid fast, obligate aerobic pathogen. It is widely known that the primary site of infection are macrophages and dendritic cells in lungs.Previuos findings have shown that mesenchymal stem cells (MSC) could be a potential harbouring site for M.*tb* infection. We want to explore how the MSC niche is favourable for the establishment of the dormant phase.It will be very intresting to study about the membrane vesicles which are released by these infected MSCs.These membrane vesicles contain differen types of proteins, extracellular RNAs which could be involved in quorum sensing as well as immune evasion.We are trying to screen biomolecules in these vesicle so that they may act as potential biomarker for latent TB.