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सीएसआईआर-कोशिकीय एवं आणविक जीवविज्ञान केन्द्र
CSIR-CENTRE FOR CELLULAR AND MOLECULAR BIOLOGY
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
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Dr. K. Thangaraj, FNA, FASc, FNASc
J C Bose Fellow & Former Director, CDFD

CITATION

Dr. Nandicoori's research has contributed an exhaustive body of work establishing novel concepts, technologies, and early lead molecules in defining kinase-mediated signaling networks in Mycobacterium tuberculosis (*Mtb*). Mtb contains eukaryotic-like protein Serine/Threonine kinases, and his group has elucidated the biology of two essential kinases (PknA and PknB), an essential phosphatase (PstP) and an unusual thioredoxin-fold containing kinase PknG. By generating technologies that permit elegant analyses of specific kinases in the infectious pathogen, his group has identified remarkably essential phosphorylated protein substrates. In a series of carefully designed studies, his group established the molecular and biochemical essentiality of N-acetylglucosamine-1-phosphate uridyltransferase (GlmU) and established the therapeutic potential of targeting PknG against latent mycobacterium. Work from his lab provided a link between *Mtb* infection and host DNA damage and established a role for host epigenetics in immune responses, opening up new possibilities for host-directed therapy for the treatment of TB. His group identified a novel role for DNA repair genes in the evolution of drug resistance and identified a novel transcription factor that regulates stress-responsive biosynthesis of Cysteine in *Mtb*.

Together, he has published 84 papers in high-impact journals such as ***EMBO J, Nature Communication, Elife, PLoS Pathogen, J. Cell Science, J. Biol. Chem***. that addresses this crucial aspect. New vectors his lab has generated have been widely used and acknowledged by mycobacterial researchers worldwide. Technologies and small molecule leads emerging from this solid work show his group's unique capabilities in undertaking challenging problems toward eliminating global Tuberculosis in the future.

Sincerely,

[K. Thangaraj]

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