



सी डी एफ डी CDFD

प्रो. उल्लास कोलथुर-सीताराम
जे.सी. बोस फेलो
निदेशक

डी एन ए फिंगरप्रिंटिंग एवं निदान केन्द्र

(जैव प्रौद्योगिकी विभाग, विज्ञान एवं प्रौद्योगिकी मंत्रालय, भारत सरकार का स्वायत्त संस्थान)

Centre for DNA Fingerprinting and Diagnostics

(An autonomous institute of the Dept. of Biotechnology, Ministry of Science & Technology, Govt. of India)

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Director

21st August, 2024

Letter of Justification

It gives me immense pleasure to nominate Dr. Sangita Mukhopadhyay for the 'Sun Pharma Science Foundation Research Fellowships, 2024 in Medical Sciences-Basic Research'. Dr. Sangita has made significant contributions towards understanding the host's response to *M. tuberculosis* infection, and in designing of immunomodulators, which has promising implications on human health. She has published 73 research papers in high impact peer reviewed International Journals. Her laboratory is well funded by Grants from various agencies like TWAS (Italy), DBT, DST-SERB, CSIR (Medical Science), CSIR-ASPIRE and ICMR, and she has guided several PhDs and PhD students.

Based on her research publications, it is clear that Dr. Mukhopadhyay has made very important contributions in the areas of Immunology and Infection biology (Tuberculosis [TB]) research in India. She has several publications in prestigious international journals like *Journal of Immunology*, *EMBO Molecular Medicine*, *iScience*, *Blood*, *PLoS Pathogens*, *Journal of Biological Chemistry*, *Immunology* etc. Her excellent training and strong background, combined with her perseverance and expertise, makes her a valuable asset for the community. Not only Dr. Mukhopadhyay's research has led to several high-impact publications, but also to many National and International patents. Her work on host-directed immunotherapy is promising for development of effective therapeutics against TB. This is also important because since the discovery of INH in the 1940s, no effective anti-mycobacterial drugs has been commercially available, making the tuberculosis a huge public burden especially with the emergence of MDR/XDR strains. Host-directed therapy appears to be a futuristic and an attractive alternative to drug-based therapeutic strategy to control tuberculosis to effectively counter emergence of resistance.

Her contribution to science has been well recognized and she is a recipient of prestigious Fellowships like TATA Innovation Fellowship and JC Bose Fellowship as well as many National and International Awards. She is an elected Fellow of the National Academy of Sciences, Indian National Science Academy and Indian Academy of Sciences. Also, her recent publication of a novel biologic anti-inflammatory protein/peptide that inhibits mast cells is effective to treat inflammation and tissue injury, which is recently being explored by BCIL and NC-TRAC for commercialization.

Based on her seminal contributions in Basic and Translational Medical Science Research, I am delighted to endorse her nomination for the prestigious 'Sun Pharma Science Foundation Research Fellowships, 2024 in Medical Sciences – Basic Research'. This will be a duly deserved recognition of her leading efforts.

[PROF. ULLAS KOLTHUR-SEETHARAM]

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