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National Centre For Cell Science

जैवप्रौद्योगिकी विभाग, भारत सरकार का स्वायत्त संस्थान

(An Autonomous Institution of the Department of Biotechnology, Government of India)

Sharmila Bapat, Ph.D., FASc, FNASc Director (Additional Charge)

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Citation on the Research Work of the Applicant

Dr. Jomon Joseph deserves this award for his seminal contribution to understanding the function of an underexplored cell organelle called annulate lamellae (AL). His study highlights the importance of AL, particularly an AL-resident nucleoporin, Nup358, in microRNA-mediated mRNA translation and regulation of ER-mitochondria contacts. Functions controlled by ER-mitochondria contacts include calcium homeostasis, inter-organelle lipid exchange, mitochondrial bioenergetics and autophagy. Interestingly, research has independently shown that impairment of miRNA-mediated translation regulation, nucleo-cytoplasmic transport and ER-mitochondrial contact site functions significantly contributes to the pathogenesis of neurodegenerative diseases and cancers. His research interconnects these three processes and provides a comprehensive framework for future directions in designing therapeutic intervention strategies. His work not only provides insights into the functioning of AL but also opens up further avenues to explore the mechanisms of the pathophysiology of neuronal disorders and cancers.

With best regards

Sharmila A. Bapat