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It is truly a pleasure to write this justification letter for Prof. Samir K. Maji for the Sun Pharma Science Foundation Research Awards 2023. Prof. Maji is a highly recognized scientist, substantiated by his research quality, high citations, and publication record. His work focuses on fundamental and applied research to understand the role of protein-misfolding, aggregation, and amyloid formation associated with human diseases such as Parkinson's disease (PD), cancers, and the native function of these amyloid called functional amyloid. For example, Prof. Maji and his team have recently shown the co-storage of human prolactin and neuropeptide galanin as functional amyloids in secretory granules ***(Chatterjee et al., eLife, 2022)***. His group is the pioneer in demonstrating that α-Synuclein (α-Syn) liquid-liquid phase separation precedes its aggregation ***(Ray et al., Nature Chemistry, 2020)*** associated with Parkinson's disease. They analyzed several cellular and environmental factors affecting oligomerization and fibrillation of α-Syn. His team has also demonstrated the conversion of α-Syn from solution to a gel-like state at high concentrations, consisting of toxic oligomers, monomers, and short fibrils ***(Kumar et al, Angewandte Chemie, 2018)***. Prof. Maji and his group have investigated the prion-like nature of p53 amyloid and its implications in cancer pathogenesis ***(Ghosh et al, Cell death and differentiation, 2017)***, ***(Navalkar et al, Journal of Cell Science, 2021)***. In pursuit of stem cell-based therapy for PD, his group has developed smart hydrogels that promote cell adhesion and stem cells differentiation to a neuronal lineage ***(Jacob et al, Biomaterials, 2015, Das et al, NPG Asia Materials, 2016)***. They have filed six Indian patents and two US patents, out of which two have been granted. Their innovative hydrogel technology has led to a start-up, Convalesce Inc., California, USA, by one of his former Ph.D. students.

Prof. Maji has several accolades to his credit in recognition of his vital scientific contribution. He is an elected fellow of the Indian Academy of Sciences, Royal Society of Chemistry (FRSC), Royal Society of Biology (FRSB), and National Academy of Science (FNASc). He has received the SC Bhattacharya award, Sastra Obaid Siddiqui award, P.B Rama Rao Memorial Award, IIT Bombay Impactful Research Award, IIT Bombay Excellence in Teaching Award, TATA Innovation Fellowship, NASI Reliance Platinum Jubilee Award, National Bioscience Award, Young researcher award, Lady Tata Memorial Trust, and several other recognitions.

Given his achievements, it is undoubted that Prof. Maji is a versatile researcher who is highly regarded by his peers with an even stronger potential for further development. I happily endorse his application with the highest possible priority.

Director

IIT Bombay

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